

Designing a framework to enhance & implement customer orientation in buyer-supplier dyads.

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1 Project brief.

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IDE Master Graduation

Project team, Procedural checks and personal Project brief

This document contains the agreements made between student and supervisory team about the student's IDE Master Graduation Project. This document can also include the involvement of an external organisation, however, it does not cover any legal employment relationship that the student and the client (might) agree upon. Next to that, this document facilitates the required procedural checks. In this document:

- The student defines the team, what he/she is going to do/deliver and how that will come about.
- SSC E&SA (Shared Service Center, Education & Student Affairs) reports on the student's registration and study progress.
- IDE's Board of Examiners confirms if the student is allowed to start the Graduation Project.

! USE ADOBE ACROBAT READER TO OPEN, EDIT AND SAVE THIS DOCUMENT

Download again and reopen in case you tried other software, such as Preview (Mac) or a webbrowser.

STUDENT DATA & MASTER PROGRAMME

Save this form according to the format "IDE Master Graduation Project Brief_familyname_firstname_studentnumber_dd-mm-yyyy". Complete all blue parts of the form and include the approved Project Brief in your Graduation Report as Appendix 1 !

family name	<u>Hittema</u>	Your master programme (only select the options that apply to you):
initials	<u>D.F.F.</u> given name <u>Daan</u>	IDE master(s): <input type="radio"/> IPD <input type="radio"/> Dfl <input checked="" type="radio"/> SPD
student number	<u>4970721</u>	2 nd non-IDE master: _____
street & no.	_____	individual programme: - - (give date of approval)
zipcode & city	_____	honours programme: <input type="radio"/> Honours Programme Master
country	_____	specialisation / annotation: <input type="radio"/> Medisign
phone	_____	<input type="radio"/> Tech. in Sustainable Design
email	_____	<input type="radio"/> Entrepreneurship

SUPERVISORY TEAM **

Fill in the required data for the supervisory team members. Please check the instructions on the right !

** chair	<u>Sicco Santema</u>	dept. / section: <u>DOS/MCR</u>
** mentor	<u>Albert Plugge</u>	dept. / section: <u>DOS/MCR</u>
2 nd mentor	<u>Joyce Fuld</u>	
	organisation: <u>Pezy Group</u>	
	city: <u>Houten</u> country: <u>The Netherlands</u>	
comments (optional)	Both chair and mentor are familiar with change management. Sicco possesses the valuable knowledge to guide the overall research. However, Albert is a subject expert on this matter and can provide insights from practice.	

Chair should request the IDE Board of Examiners for approval of a non-IDE mentor, including a motivation letter and c.v.



Second mentor only applies in case the assignment is hosted by an external organisation.



Ensure a heterogeneous team. In case you wish to include two team members from the same section, please explain why.

APPROVAL PROJECT BRIEF

To be filled in by the chair of the supervisory team.

chair Sicco Santema date 12 - 04 - 2021

signature 

sicco santema
 Digitaal ondertekend door sicco santema
 Datum: 2021.04.12 16:19:00 +02'00'

CHECK STUDY PROGRESS

To be filled in by the SSC E&SA (Shared Service Center, Education & Student Affairs), after approval of the project brief by the Chair. The study progress will be checked for a 2nd time just before the green light meeting.

Master electives no. of EC accumulated in total: _____ EC

Of which, taking the conditional requirements into account, can be part of the exam programme _____ EC

List of electives obtained before the third semester without approval of the BoE _____

YES all 1st year master courses passed

NO missing 1st year master courses are:

name _____ date _____ signature _____

FORMAL APPROVAL GRADUATION PROJECT

To be filled in by the Board of Examiners of IDE TU Delft. Please check the supervisory team and study the parts of the brief marked **. Next, please assess, (dis)approve and sign this Project Brief, by using the criteria below.

- Does the project fit within the (MSc)-programme of the student (taking into account, if described, the activities done next to the obligatory MSc specific courses)?
- Is the level of the project challenging enough for a MSc IDE graduating student?
- Is the project expected to be doable within 100 working days/20 weeks ?
- Does the composition of the supervisory team comply with the regulations and fit the assignment ?

Content: **APPROVED** **NOT APPROVED**

Procedure: **APPROVED** **NOT APPROVED**

comments

name _____ date _____ signature _____

A transition framework for organisational change _____ project title

Please state the title of your graduation project (above) and the start date and end date (below). Keep the title compact and simple. Do not use abbreviations. The remainder of this document allows you to define and clarify your graduation project.

start date 03 - 05 - 2021 12 - 11 - 2021 end date

INTRODUCTION **

Please describe, the context of your project, and address the main stakeholders (interests) within this context in a concise yet complete manner. Who are involved, what do they value and how do they currently operate within the given context? What are the main opportunities and limitations you are currently aware of (cultural- and social norms, resources (time, money,...), technology, ...).

Pezy Group (2020) is a leading design and engineering agency in the Netherlands. The organization is on the brink of engaging in a change project by introducing a new strategy to optimize the client focus internally. This project is regarding the handover between the commercial and operational department. Currently, the operational project managers and leaders are not building long-term commercial relationships with clients. This is partly because both departments have divergent goals, are not monitored equally, and hence communicate differently with clients. As a result, proposals and agreements with the clients are too general and the commercial capability remains underdeveloped. A strategy is set to be developed by which a client is considered as a market of one.

Challenge
 To implement this strategy, Pezy Group needs to be redesigned by integrating structures, processes and roles (Warren, 2021). However, Warren (2021) also states that organization design is fundamentally about the people, the people who fulfil their role in the organization's process. Guiding the employees of Pezy Group to adapt to the envisioned change is called change management, as is visualized in figure 1. Al-Haddad & Kotnour (2015) indicate that understanding the human side of change should be studied in future research. However, change management is difficult. Studies show that two out of three transformation initiatives fail (Sirkin et al., 2015). Sirkin (2015) mentions that the resistance of employees is seen as a barrier to change management's success. This suggests that the failure to engage the affected parties at the beginning of the process ensures resistance to change and the potential failure of the change project itself (Singh, 2020).

Opportunity
 Pezy Group recognizes the need for a well-designed change project that focuses on and includes its employees for a successful adaptation of the new strategy. Leybourne (2016) confirms this need for understanding and guiding employees through transition, which has been overlooked in the change literature. Leybourne urges for further research of the emotional effects of transition through organisational change. Organizational changes are often associated with risks of stress and therefore calls for new ways of thinking about change processes (Dahl, 2011). Encouraged by Shin et al. (2012) to research other resources which potentially enhance employees' commitment to change or reduce stress associated to it and the aforementioned literature gap this graduation project is initiated. The focus of this graduation project is on the lower arrow, but in connection with the upper arrow, as is displayed in figure 2.

References can be found in the separate appendix document.

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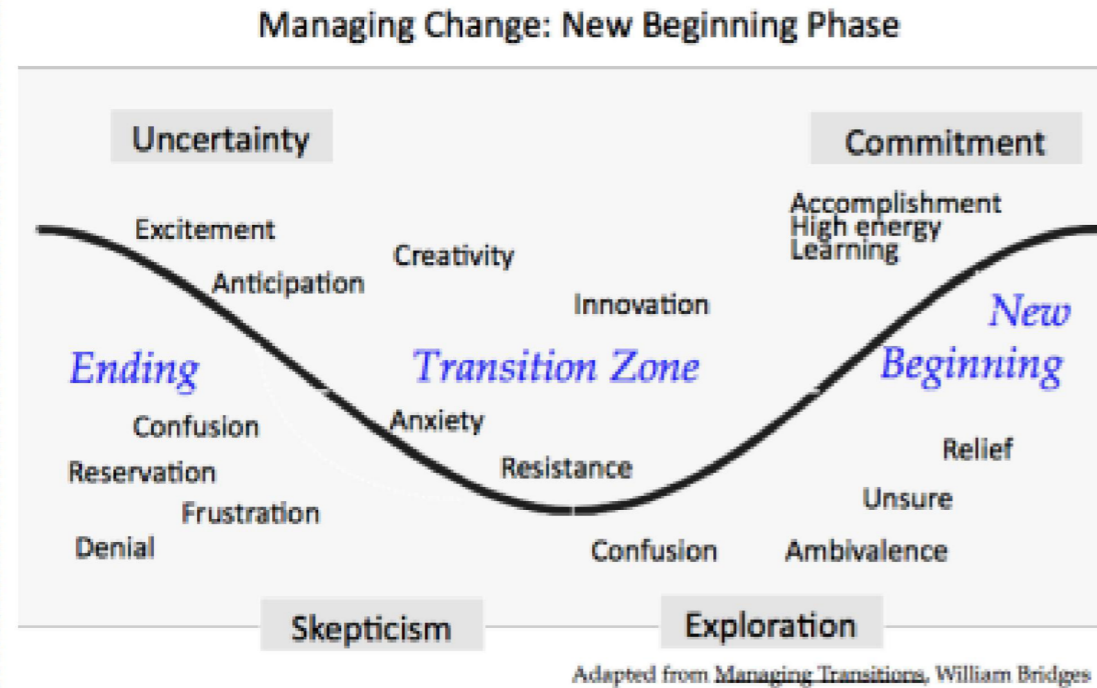


image / figure 1: Change management. Adapted from *Managing transitions*, William Bridges

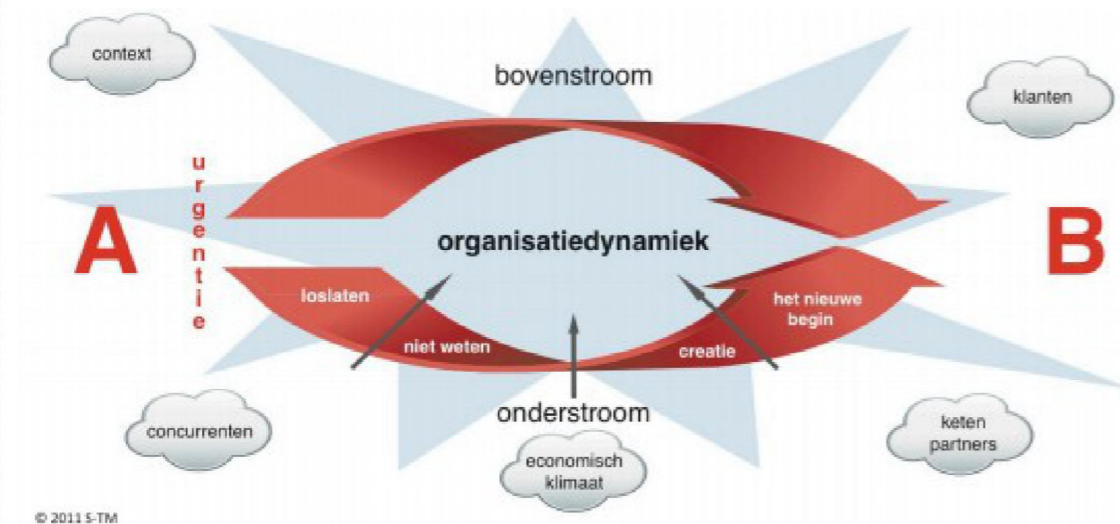


image / figure 2: Systemisch transitie management. Adapted from PlanB, Maaik Thiecke & Bianca van Leeuwen

PROBLEM DEFINITION **

Limit and define the scope and solution space of your project to one that is manageable within one Master Graduation Project of 30 EC (= 20 full time weeks or 100 working days) and clearly indicate what issue(s) should be addressed in this project.

A change management project will only become successful when the employees adopt the new strategy and behaviour, rather than just introducing new processes, structures and roles. At Pezy Group, a case can be developed to research the role of design in the psychological transition of employees during a change project. The handover process from the commercial to the operational department of Pezy Group is currently not optimal because the employees do not fully adapt to the processes, structures, roles and strategy in place. A lot of effort is required to align the clients need and agreements made by the commercial team with the operational department. Hence, Pezy Group misses out on establishing long-term commercial relationships with clients and valuable business opportunities. Therefore the strategy to work in client teams is introduced. The challenge lies in guiding and involving employees through this psychological transition towards change. The opportunity to research the psychological transition of employees towards the required behaviour which fit the strategy involves reducing the emotional effects of stress and enhance the commitment to the project. By improving this process, Pezy Group is able to be the innovation partner it strives to be.

The scope of this research will be shaped by the guiding and supporting role of design in the psychological transition of employees. To reduce the stress within the psychological transition, the perspective of the Conservation Of Resources (COR) theory (Hobfoll, 1988, 1989) will be the starting point of this graduation project. To enhance the commitment to the change project and the behavioural change the perspective of systemic transition management (Thiecke & van Leeuwen, 2013) will be taken. The case study is limited by a project in one of the four segments in which Pezy Group is active. In consultation with Pezy Group, it is decided to focus on the segment "ventures and special deals". The research's target group will be the operational project managers and leaders because it is expected that they require the most behavioural change.

ASSIGNMENT **

State in 2 or 3 sentences what you are going to research, design, create and / or generate, that will solve (part of) the issue(s) pointed out in "problem definition". Then illustrate this assignment by indicating what kind of solution you expect and / or aim to deliver, for instance: a product, a product-service combination, a strategy illustrated through product or product-service combination ideas, In case of a Specialisation and/or Annotation, make sure the assignment reflects this/these.

Design a framework that reduces stress and enhances commitment in a change process for operational employees who are in the transition towards a new strategy of Pezy Group to increase the commercial capabilities and internal client focus.

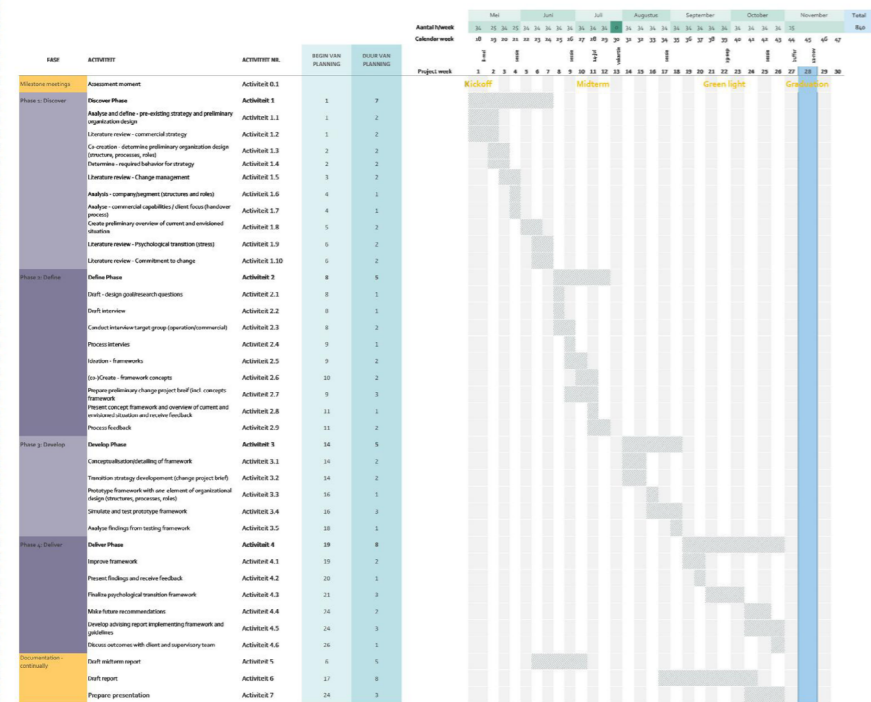
This framework will implement design to improve change management by guiding people through the process by iteratively creating. Design thinking is becoming increasingly popular within the change management and organisation design field because the human-centric mindset enables the employees to assimilate into the change (D'Offay, 2018). Deliverables:

- A documented change project. In co-creation, the strategy outcomes (envisioned change) will be further determined. Pezy Group's envisioned strategy needs to be developed, by which a client is considered as a market of one. Suggestions on how to improve the commercial capabilities are taken into account in this detailed change project briefing.
- An overview of the current situation and the needs of the envisioned situation. The analysis for this assignment will include the current commercial strategy of the segment, its structures, processes, roles, and multiple stakeholders. The current and required behaviour will be analysed and presented.
- A change management framework. Based on the research a framework will be developed that by design stimulate the employees to transition sustainably to the required behaviour by reducing stress and enhancing commitment during the change project.
- An advising report. The developed framework will be piloted in Pezy Group's segment. The report contains the first outcomes of the test and written advice on how to deal with change management in the organisation. A roadmap suggestion will be made on how to extrapolate this project into a change programme.

PLANNING AND APPROACH **

Include a Gantt Chart (replace the example below - more examples can be found in Manual 2) that shows the different phases of your project, deliverables you have in mind, meetings, and how you plan to spend your time. Please note that all activities should fit within the given net time of 30 EC = 20 full time weeks or 100 working days, and your planning should include a kick-off meeting, mid-term meeting, green light meeting and graduation ceremony. Illustrate your Gantt Chart by, for instance, explaining your approach, and please indicate periods of part-time activities and/or periods of not spending time on your graduation project, if any, for instance because of holidays or parallel activities.

start date 3 - 5 - 2021 end date 12 - 11 - 2021



Preparatory work on the strategy, processes, structures and roles for this change project will be the starting point of the graduation project. In collaboration with Pezy Group and its internal stakeholders, the strategy to which the organization will change and the base of processes and structures will be further determined.

The planning and approach displayed in the Gantt chart are based on the double diamond model.

In agreement with Pezy Group, I will work 32 hours a week on the graduation project. The remaining 8 hours I will dedicate to supporting the commercial department of the organisation. This supporting work could possibly be linked with my graduation project, as it consists of managing and processing a benchmark analysis. The required 100 days of working on my graduation will be achieved in 25 weeks.

Weekly the process, meetings and milestones are documented. The planning showcases the foreseen holidays and breaks. These hours are not included in the required 800 hours for achieving the 30 EC.

MOTIVATION AND PERSONAL AMBITIONS

Explain why you set up this project, what competences you want to prove and learn. For example: acquired competences from your MSc programme, the elective semester, extra-curricular activities (etc.) and point out the competences you have yet developed. Optionally, describe which personal learning ambitions you explicitly want to address in this project, on top of the learning objectives of the Graduation Project, such as: in depth knowledge a on specific subject, broadening your competences or experimenting with a specific tool and/or methodology, Stick to no more than five ambitions.

Starting the master SPD at the IDE faculty of the technical university of Delft was a deliberate choice. Before this master, I studied the mainly technical-oriented IPO at the Hague University of applied sciences and often wondered why a certain project was initiated. Thereafter, I had the opportunity to study Entrepreneurship and innovation management at UC Berkeley, which resulted in building a startup. Soon after I graduated and started as a business developer. In this role, I combined my technical know-how, networking and entrepreneurship. However, I've always been more fascinated by the people and organisations developing innovation and designing our future. Through the bridging programme, master, business administrative elective courses, consulting internship at Philips up until this point, graduation, I wanted to learn more about designing environments in which people and innovation can flourish.

At the master SPD, I've learned how to create strategies to build bridges for future products and services. The electives at VU Amsterdam gave me more insights into organisational structures and the consultancy internship at Philips transformation services showed me first hand how to guide organisations and employees through change by new collaborations or optimized processes.

At the beginning of shaping my graduation topic, I was interested in aligning innovation processes and company cultures of corporate venturing, external activities such as partnerships with incubators and accelerators or an acquisition or merger. However, through multiple conversations with various specialists and organisations, I came to realize that the underlying phenomenon, namely change management, mainly interested me.

The graduation project presented in this brief feels like all previous events have led to the topic of change management. I see myself in the future designing more bridges towards the future and letting people and innovation excel. Graduating on this topic allows me to prepare for a profession related to change, innovation, strategy and people.

For this graduation project, I have defined three personal learnings I want to develop.

- In-depth knowledge of organisational design
- Manage a change project and thereby acquiring managerial qualities
- Recognize and guide people through a psychological transition

FINAL COMMENTS

In case your project brief needs final comments, please add any information you think is relevant.

Adjoined to this document, an appendix document including the references mentioned in this project brief was attached in the email you have received.

2 Creating & analysing customer journey.

2.1 Approach of developing customer journey

The customer journey is built on top of the current primary process. In this way, the employees of the organisation can easily recognise themselves and identify the customer and their interactions. This customer journey will not repeat the findings and insights discussed prior from the primary process analysis.

The customer needs and interactions with a supplier such as Pezy Group start before the conversion phase. To acquire a better understanding of the customer and context, both the generation and conversion phase will be included in the scope of the customer journey.

The customer journey is created by the approach as describe by Van Boeijen et al. (2014):

1. According to the Dutch Design Guide (Van Boeijen et al. 2014, P.53), the customer is determined first. The buyer definition, as is concluded, is too brief. To gather diverse insights regarding the customer journey, it is therefore decided to include three types of customers: active customer, former customer and a lost or not yet captured customer.
2. An initial customer journey containing actions and interactions is added to the scope of the primary process. In the customer journey and marketing literature, the names and number of stages a customer experiences vary. In this research, the following phases are used:
 - Pre-engage;
 - Orientation;
 - Engage;
 - Inform;
 - Receive;
 - Consideration;
 - Commitment.
3. Questions with regards to the goal, needs and expectations are mapped out on the customer journey (C-5.2). This is not only through the customer's perspective but also the Pezy Group employees from the commercial and operational department.

In order to answer the questions, validate the customer journey and attain a better understanding of the customer, interviews and surveys were conducted.

2.2 Gathering insights

The selected participants provide their perspectives to gather insights. As mentioned, the approach of gathering insights differ per stakeholder group. The external participants, or also known as the customers, are interviewed. The internal participants, also known as account responsible or operational support, are asked to fill in a survey. The difference between the approaches is caused by the sample size and required information.

External

The customers are interviewed to receive detailed information regarding the customer journey and their experience. Interviews and analysing the interviews are possible with a smaller sample size. Before the interview, the customers are asked to fill in a short survey to provide input for the semi-structured interviews. Semi-structured interviews were conducted with four customers. Two customers from the active customer group (large and key account) and one of the former and lost customer group. The semi-structured interview intends to touch upon the adjoined phases of generation and execution to attain a complete understanding of the customer journey. However the main focus remain at the conversion phase. Adhering to the social distancing situation due to COVID-19, the interviews are conducted virtually via Microsoft Teams. Through this medium, the interviews are captured and recorded after their approval to use their answers anonymously. The semi-structured interviews made use of an interview guide (Appendix 3)

Internal

The Pezy Group employees involved in the customer journey's conversion phase are a larger sample group (n=30). The account responsible and operational support received different surveys. The total response rate of the survey is 63,3%. In more detail, from the account responsible (n=8) 62,5% and from the operational support (n=22) 63,6% responded. Google forms is used to collect the survey responses.

2.2.1 Data analysis

Interviews

The interviews are transcribed and edited by converting the audio files into text by using the AI tool Otter-AI. The transcribed interviews are coded in Atlas.ti. The coding is executed using the Grounded Theory Methodology in two iterative stages. First, the four interviews are coded openly. A review follows up the initial coding. During this review session, similar codes are clustered, and in some cases, a new code is formed to capture the nuanced meaning of the transcript. The codes are clustered in more generic categories in the second coding round, and patterns started to emerge (Fig.A1).

The identifiable relationships between the categories represent the narrative of three grounded theories:

1. Causations of needing a product development partner;
2. Contributes of building a long-term relationship & the expectations of a trusted partner, and finally;
3. Aspects that influence decision making regarding development partner.

After several iterations, the relationships, associations, causes and effects between the cluster categories are determined. These theories are captured in a diagrammatic form. The code diagrams, discussed in the results, explain the relationships and how they affect each other.

Survey

The survey is analysed by the Google form application.

2.3 Results customer journey analysis

2.3.1 General insights from interviews external participants

The surveys (appendix C-3.1) the four customer had to fill-in prior to the interviews were discussed in the interview, several general insights are gathered and analysed about the activities and interactions whilst purchasing from a supplier. Even though the participating customers and contacts are all different, they have common needs and activities.

Preparing potential collaboration

From the preliminary survey the customers had to fill in, most indicated that the project goal they want to outsource was clear. However, from the internal study at Pezy Group, the conclusion can be made that this is not always the case. About half of the customers indicate that a maximum budget is determined before starting the project. The customers know what they are looking for in a development partner.

Positive customer experience

The customer indicates that in most cases, the account responsible of Pezy Group manages the expectations well. In addition, the customers indicate that the operational support of Pezy Group is in most cases well informed about the development request. On another positive note, most customers indicate that it is likely that they will return to Pezy Group when they have other development requests.

In or outsourcing

The amount of contact the customer wants with the development partner during the conversion phase is dependent if the project is in or outsourced, its strategic

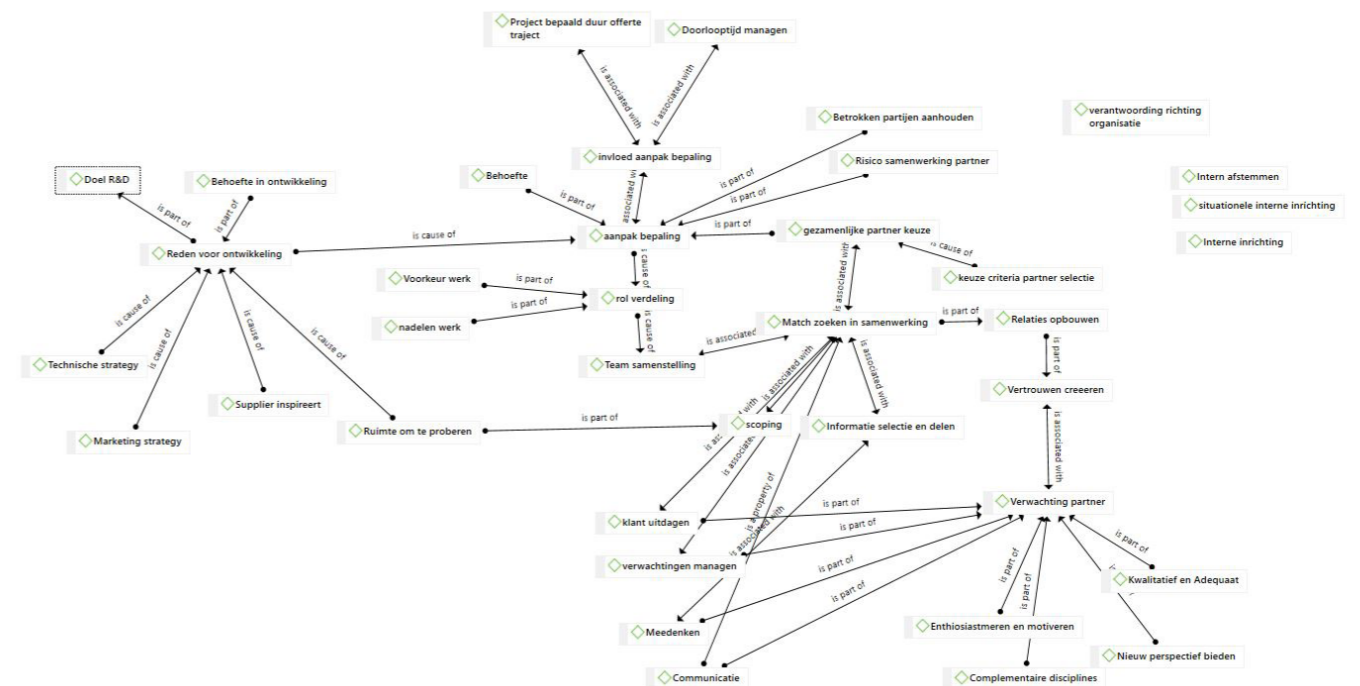


Fig. A1 Impression of clusters, categories and patterns are emerging

importance, and thus the urgency, but also the related internal clarity regarding the project. Insourcing means that the project mainly takes place at the customer and is responsible for the project management. When a customer decides to outsource the project, these responsibilities lie with the partner, Pezy Group. In this research, the case study will mainly focus on projects that are outsourced at Pezy Group. From the interviews, it can be concluded that it is a trend to insource product development more often since the customer wants to develop the knowledge internally and have more control regarding the project management. Insourcing is especially the case with strategic projects or in the case of the situational COVID-situation, insourcing reduces the amount of investments in suppliers and thus risks.

The customers indicate that they have too many development opportunities and initiatives to process or get internally funded. For the supplier Pezy Group this means plenty of potential development requests, but internal politics and strategies of the buyer influence the prioritisation.

Coordinate and compare

All customers often have internal discussions with their peers to determine the project scope, goal and decide the development partner. Even though a customer has a good relationship with a product development partner, such as Pezy Group, they always approach multiple other parties for the same development request. Their procurement strategy is to limit the number of suppliers to enhance the relationship and, as a result, have beneficial agreements

regarding project discount and planning prioritisation. But at the same time, the customer pilot with other parties to experience different ways of working remains up to date and decreases the chance of being too reliant on a few partners.

Leadtime conversion phase

The lead time of the conversion phase is influenced by the customer's project, its complexity and its importance. Important projects have normally a long runway before a clearly defined agreement is made, and both parties start executing the project. Making a proposal with a large scope size and important strategic milestones requires iterative loops between supplier and buyer. Generally speaking, the customers expect that the entire process of getting from initial contact with a potential partner to proposal till commitment will take approximately 3-4 weeks. However, with "regular" development requests, the buyer expects a proposal two weeks after the introductory meeting.

2.3.2 Interpretation of code diagrams from interviews external participants

Using the Grounded Theory Method, the customer interviews have been coded, and as a result, certain relationships and causations are identified. The code diagrams visualise these grounded theories. The diagram is a visual representation of a generalisable phenomenon that the customers experience.

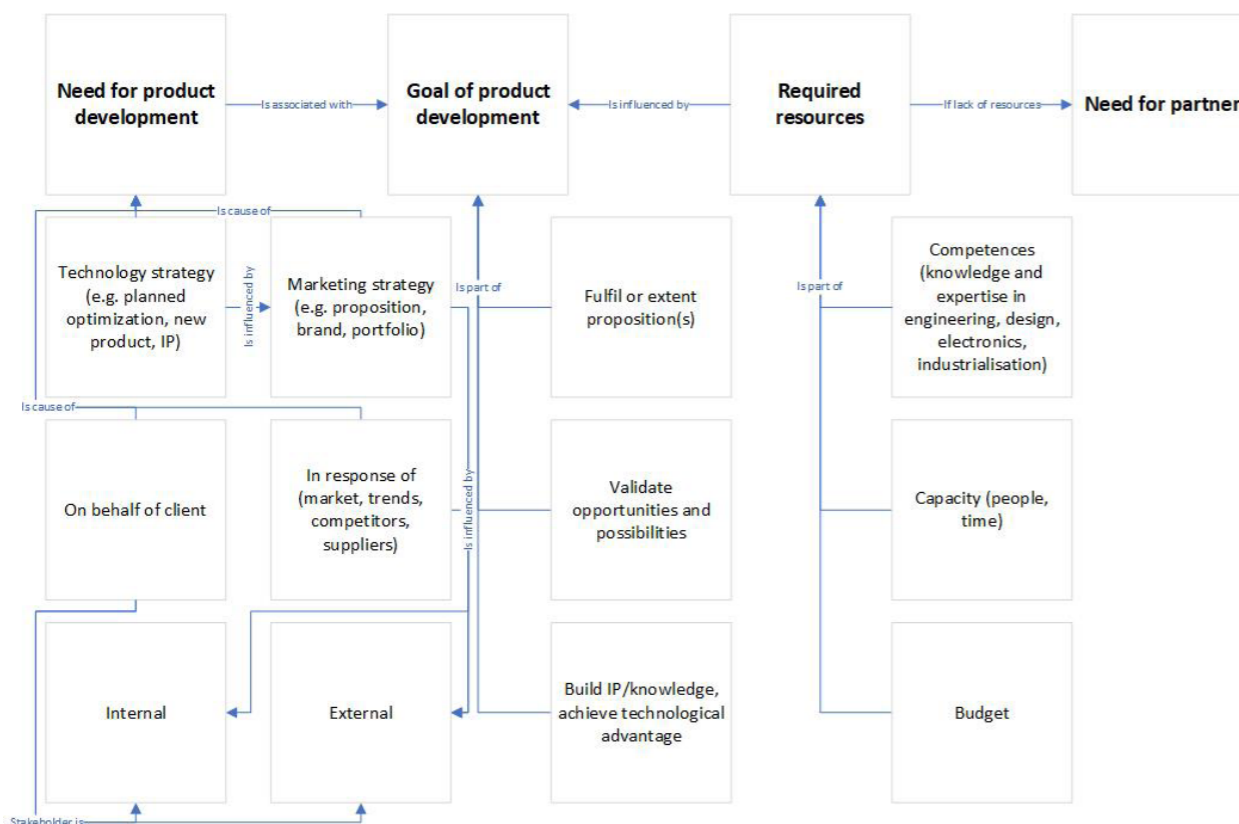


Fig. A2 Causations of needing a product development partner

1) Causations of needing a product development partner (Fig.A2)

Before a potential customer needs a partner, there is a need for product development. There are several reasons why a customer wants to develop a product. It is either part of a strategy or a response to something, which again is influenced by either internal or external developments. Product development requests have various goals. Sometimes it is to prove functionality and extend the existing knowledge base, validating a market or making certain propositions more complete. When the motivation and goal are clear, a customer begins with project management, estimating the required budget and ensuring the business case is solid. At this moment, the customer might realise that it does not have the right resources to bring the project to success. Therefore the customer starts approaching potential partners who can provide a combination of services and competencies to fulfil the need.

The grounded theory of "the causations of needing a product development partner" describe a multitude of motivations for partnering up which seem to be similar to the described benefits by Pittaway et al. (2004). Pittaway et al. (2004) describe that the goal of having a partner or supplier could be to share risks of development and investments, access to new markets and technologies, reducing time to market by the suppliers competencies and capacity, combining complementary competencies, safeguarding property rights or obtaining access to external knowledge. Customers are appealed by the services provided by a supplier such as Pezy Group because a partner might be the answer to dealing

with trends, knowledge gaps and global competition. According to several studies (Pittaway et al., 2004; Baum et al., 2010), the network relationships an organisation has with suppliers is essential for accessing knowledge to create in-house innovation, the diffusion of innovation, and learning about the practices of other organisations.

2) Contributes of building a long-term relationship & the expectations of a trusted partner (Fig.A3)

When a customer reaches out to a potential partner for the product development request, they check if there is trust in the partner to build a long-lasting relationship. The customer is looking for specific confirmation which meets their expectations of a trusted partner. The trust aspect is primarily established between the two contacts of the customer and partner, which means that this personal experience is essential in establishing trust. Trust is different for everyone, but it can be agreed upon that it is found when people have or do not have contact. These interactions are influenced by how the potential partner handles itself. A quick response, managing expectations, being thorough by validating the buyer's request, being prepared and knowledgeable contributes to a positive interaction with the customer. This trust of communication is further expended by the trust in how a partner runs its business. When the customer has a positive attitude towards the organisation, its process, expertise, competencies, and disciplines, it is probably a suiting partner to build a long-term relationship. The customer probably has all these expectations of a trusted long-term partner, of which some are clear for them but others more latent.

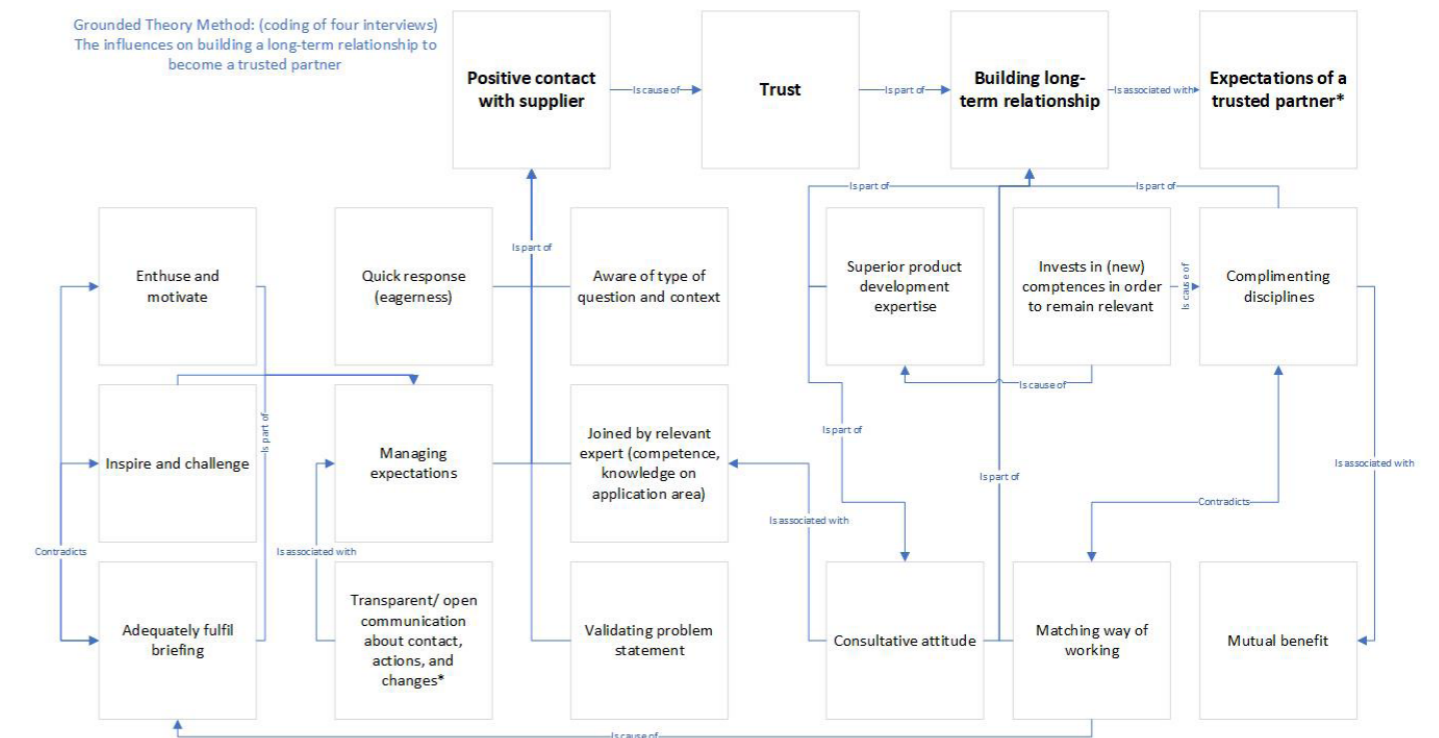


Fig. A3 Contributes of building a long-term relationship & the expectations of a trusted partner

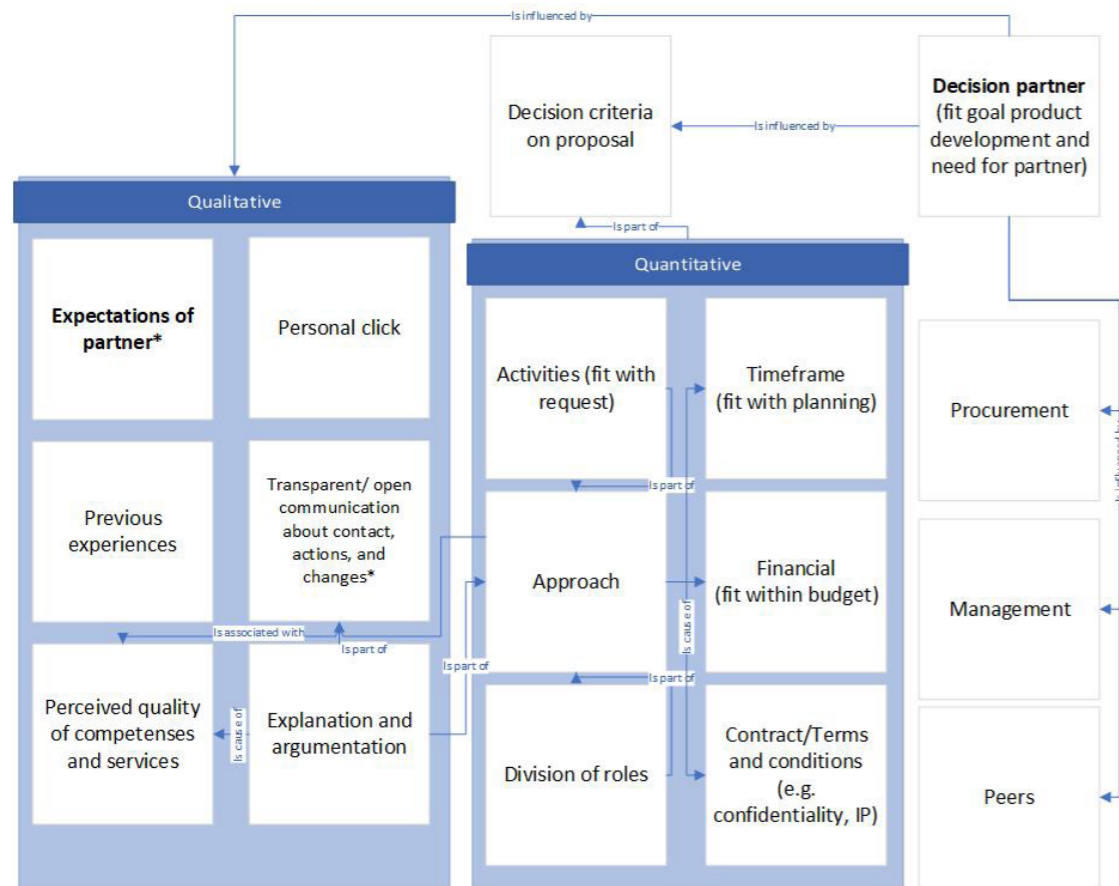


Fig. A4 Aspects that influence decision making regarding development partner

3) Aspects that influence decision making regarding development partner (Fig.A4)

By the end of the conversion phase of Pezy Group, the customer must decide which partner and proposal they pick for the development request. The decision is based on both qualitative and quantitative criteria. The qualitative criteria are influenced mainly by the human interactions with the partner, the established trust and the relationship. This is related to the previous diagram of partner expectations. The quantitative criteria are the aspects that are written on paper in the proposal. The customer often has a clear understanding of what the bandwidth of these criteria should be. For instance, the customer has a particular ballpark figure in mind of the needed investment for the development phase. The partners' proposals must comply with these criteria, or the supplier is not selected to execute the project. The final decision of who will become the partner for the development project is not only made by the customer's contact. The decision is also influenced by the buyer contact's peers, their superior/management, and sometimes the procurement department.

The third code diagram - "Aspects that influence decision making regarding development partner", can emphasise the conclusion of Brannback (1999) which states that many variables influence the promoted services and, finally, the establishment of the relationship between buyer and supplier.

In the case of this research, the supply market consists of product development agencies in the Netherlands. The supply market factors as described by Kraljic (1983) can be linked to the grounded theories "causations of a needing a product development partner" and the "Aspects that influence decision making regarding development partner". The grounded theories indicate that the development request, the motivation and the relational background are deterrents for the buyer expectations towards the supplier and thus important for the decision making of the purchase. The factors of the supply market as described by Kraljic (1983), such as competitors did not come forward from the interviews. The grounded theory could be enriched by including a more extensive scope of suppliers, rather than just the dyad between buyer and supplier.

2.3.3 Insights from survey internal participants

From analysing the survey results, some similarities and contradictions between the account responsible and operational support appear. This section further describe the insights from the internal participants divided in account responsible and operational support.

Account responsible

The survey insights of the account responsible can be further specified between the group leaders and business developers. The data does not indicate any differences between the case study's locations because of privacy concerns.

Effective process

The conversion phase is more effective and clear for group leaders than for the business developers, who indicate that it is the case 50% of the time. Also, the group leaders who handle smaller accounts indicate that the development request is clearer than the business developers who manage large and key accounts. At the same time, the business developers indicate that they determine the development approach for project execution with all stakeholders in most cases. The group leaders indicate that they only involve all stakeholders in 50% of the cases.

Involving operations

It is clear who from operational support can be involved for the group leaders since they are part of their group. The business developers express how it is, in most cases, unclear how to involve operations formally. However, the business developers believe that they keep the planning of the operation in mind while making a proposal in the conversion phase. Remarkably, the group leaders, who are mainly responsible for capacity planning, indicate that they keep this only in 50% of the cases in mind.

The account responsible only thoroughly briefed the operational support about the development request in half of the cases. In addition, in only half of the cases, the account responsible can accurately indicate which Pezy Group development stage fits the customer's requests. The OUOYP-document, which help in validating the development request and the internal briefing, meant to create more clarity. The supporting OUOYP-document is used only in half of the cases.

Operational support

The survey insights of the operational support can be further specified between the Pezy Group locations Houten, Groningen and Eindhoven. Further detailing of the operational supports function is not possible because of privacy concerns.

Being prepared

In about half the cases, the operational support does not receive preliminary information for buyer meetings. At the Pezy Group locations, Groningen and Eindhoven sharing this information occur more often than in Houten. However, in Groningen and Houten, the preparations for scoping sessions are insufficiently aligned in most cases.

Being informed

At Groningen, the briefing of the operational support by the account responsible is in most cases sufficient. However, at the Houten location, this is, in most briefings, not the case.

The motivation of the customer's development request is in 50% of the cases clear. At the location Eindhoven, the motivation of the request is least known.

operational support is often not informed about customer developments when Pezy Group does not work for the customer. Certain customers, large and key accounts, have achieved a status for which Pezy Group reserves the familiar product developers for the project execution. The established relationship these developers have with the customer is invaluable since less effort is required to get up to speed and get familiar with customer expectations regarding quality and the way of working.

Being involved

As described in the proposal, the determined development approach for the execution phase is 50% of the cases in agreement with the operational support. Often the operational support who have been involved in the conversion phase is also part of the project execution. However, it is noted that in Houten specifically, in 50% of the cases, the involved operational support remains involved. Whilst in Groningen, this is for a majority the case.

3 Interview guide for buyers.

Interview Guide (30 min) – ENG

Customer journey > validate customer journey and how they deal with suppliers. Learn their internal process, expectations and motivation.

Semi-structured interview - buyers

- Relation lost in conversion
- Former client
- Existing client

>> check answers survey, make notes and draft questions.

5 min: Introduction: Welcome, thank you for accepting this meeting. I am glad you agreed on participating in this research. I am Daan Hittema, a Graduate researcher at Pezy Group. With this research Pezy Group want to further improve the customer journey and further become the product development partner we strive to be.

My research is about the customer journey and how to implement a more customer oriented culture in the organization. The framework I will create includes the buyer/seller perspectives, by applying design thinking ion change management.

Thank you for filling in the preparatory survey. In this semi-structured interview we will dive a bit deeper in your motivations, expectations and company processes. Do you give permission to record this interview?

10 min: Preparation regarding development question:

- How is a project created in your organization?
- When does the need for development arise?
- Do you already contact or think about partners which might help?
- How do get approval for the project?
- Do you follow a roadmap?
- How do you search for solutions? E.g. internally, secondment, partner, procurement, freelancers, etc..
- Do you have a procurement rules or preferred partner list to use as starting point in contacting suppliers.
- What is your experience in preparation of a product development project?
- Why do you expect that a specific time frame is feasible?
- The budget is based on what?

- What is it that you seek in a development partner?
- What did you appreciate from other development partners?
- What learnings did you have from partners?
- How does it affect your partner selection criteria now?

15 min: Decision-making regarding the quotation

- Do you know beforehand how to inform the potential partners?
- Which information do you share, which information do you keep hidden and perhaps reveal only after commitment?
- Is it appreciated when the partner challenges your development question?
- Do you have the ability to alter a project goal and focus?
- What is your expectation when sending out a request for quotation?
- What is your expectation after the first meeting?
- What do you do when you receive a proposal?
- Is it clear who has the final say in granting a project to another party?
- How do you decide if the received project proposal is right for you?
- When is a project proposal right for you?
- What does a supplier need to do in order to be the only one you approach for a development project?

4 SWOT-matrix.

Strengths

1. Process: Pezy Group unconsciously recognises its own out or in-supplier status by labelling a buyer as a new, lost or existing (active) customer. This is in accordance with Gadde & Snehota's (2000) note that a supplier needs to realise its status to be customer-oriented because it is assumed that the interaction varies between new or existing customers.
2. Process: It can be concluded that a CRM platform and sales process are in place. Supported by an IT system to manage customer information.
3. Customer journey: The complementary knowledge and competencies established through experience of collaborating together influence the decision making of the active customers positively.
4. Customer journey: The informal contacts between active buyers and the supplier to acquire quick indications allow the buyer to assess the possibilities and coordinate the development request.
5. Customer journey: Buyers indicate that they have had a positive experience with Pezy Group, expectations are often managed well, all stakeholders are well informed, and they would come back to the supplier.
6. Customer journey: The conversion phase is effective for group leaders with regard to determining the approach and involving the operational support.

Opportunities

- A. Customer journey: Buyers continue to require complementary knowledge and competencies of suppliers.
- B. Customer journey: Buyers have too many development request and initiatives to process or get internally funded.
- C. Customer journey: Solutions to make the process more effective, less time consuming based on for instance standardisation build on existing knowledge and experience is suggested by the internal participants.
- D. Customer journey: Buyers appreciate the continuity of contacts of the supplier in the interactions. Thereby customer specific knowledge can be applied to ensure an efficient joint execution of the development request.

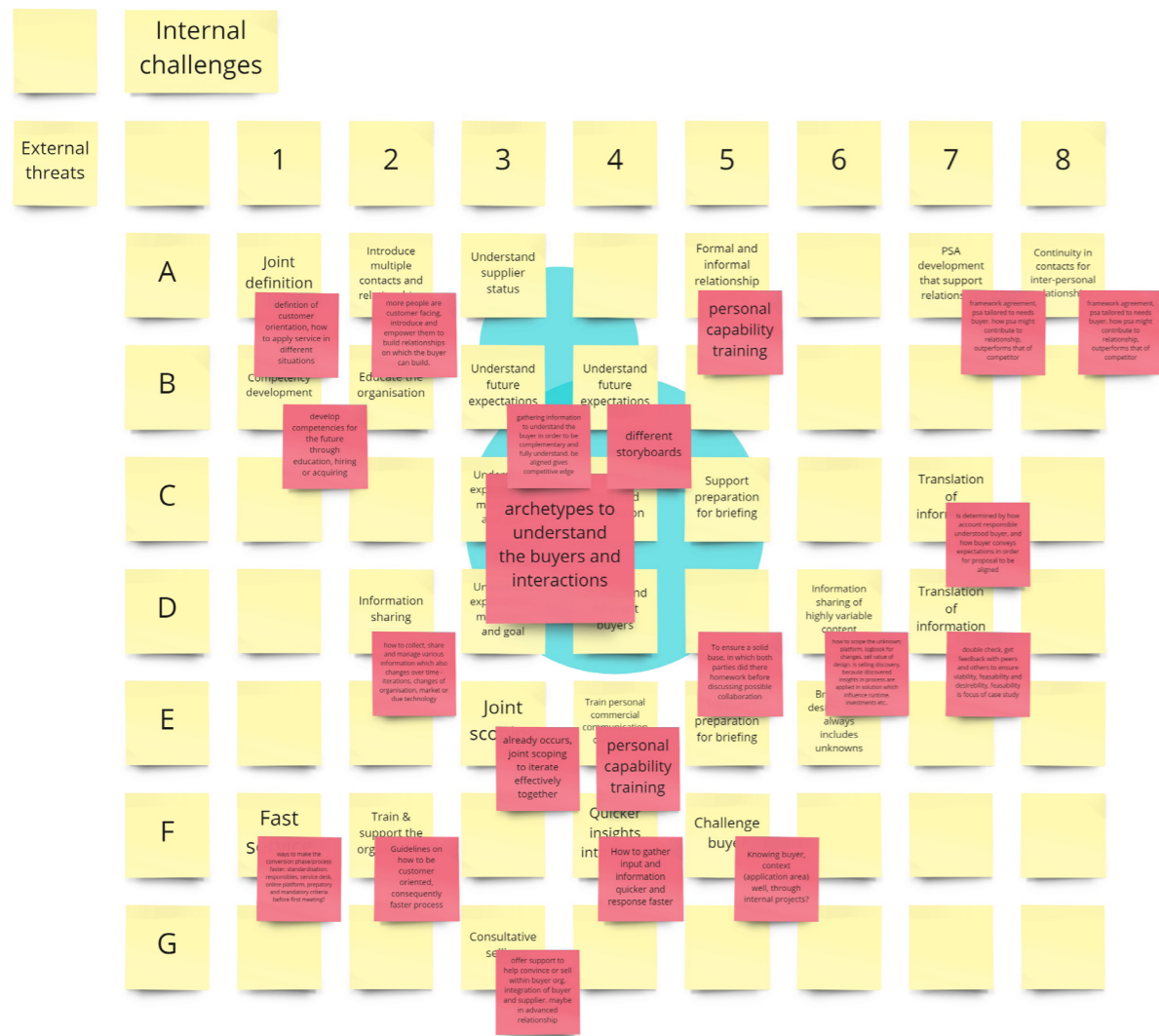
Weaknesses (Challenges)

1. Functions: The main insight is that the organisation expects that the operational employees are customer-oriented. However, what customer orientation means is undefined. In addition, after inquiring with the MT, it becomes apparent that customer orientation is currently not monitored or discussed in yearly evaluation meetings with operational employees, which means that the people who provide commercial support are not educated or receive guidance in customer orientation.
2. Structure: According to the management team, the number of operational employees involved in the conversion phase exceeded the expectations. As mentioned in the function description, it is essential to note that the operational support does not receive any guidance on being customer-oriented. The customer orientation framework will impact more people in the case study than previously expected.
3. Process: The buyer definition of Pezy Group implies a limited understanding of its buyers. This perspective is strengthened by the limited definition of the buyer and the missing presence in the primary process.
4. Customer journey: The customer's development request and motivation is often not understood by the account responsible and operational support, resulting in a misaligned proposal.
5. Customer journey: The account responsible does not always give regular updates to the buyer regarding the development of the proposal.
6. Customer journey: The operational support receives insufficient briefing for making a proposal. Consequently, the account responsible is not satisfied with the input of the operational support.
7. Customer journey: The account responsible edits the input of the operational support, does not provide feedback, which results in a sent proposal that is not always feasible for the operation.
8. Customer journey: It is unclear how to or it is difficult to involve the fitting operational support which might also be involved in the execution of the development request.

Threats

- A. Customer journey: No relationship with suppliers is exclusive for active buyers because they need to mitigate risks. Therefore buyers always interact with various in and out suppliers.
- B. Customer journey: Buyers expect the suppliers to invest in their competencies to remain relevant and complementary in the future.
- C. Customer journey: Buyers know what they are looking for in a supplier, but find it hard to express this because the expectations of a trusted supplier consists of and is influenced by many aspects.
- D. Customer journey: Buyers have changing and variable expectations regarding the details of the expected proposal of the supplier
- E. Customer journey: The briefing of the development request is not always clear. The buyer iterates on the request, also with other potential suppliers, to ensure that the proposal meet the expectations.
- F. Customer journey: The buyer expects a proactive attitude in the interactions with the supplier. Including the response and lead time, which is needed to get a quick indication for the buyer on which they base the briefing and supplier selection.
- G. Customer journey: The contact of the buyer needs to consider internal stakeholders and the politics in the buyer's organisation in making a decision and giving commitment to the selected supplier.

5 Search areas.



	Internal challenges							
External threats	1	2	3	4	5	6	7	8
A	Joint definition	Introduce multiple contacts and relationships	Understand supplier status		Formal and informal relationship building		PSA development that support relationship	Continuity in contacts for inter-personal relationships
B	Competency development	Educate the organisation	Understand future expectations	Understand future expectations				
C			Understand expectations, motivation and goal	Understand intended interaction	Support preparation for briefing		Translation of information	
D		Information sharing	Understand expectations, motivation and goal	Understand different buyers		Information sharing of highly variable content	Translation of information	
E			Joint scoping	Train personal commercial communication capabilities	Support preparation for briefing	Briefing of design, which always includes unknowns		
F	Fast service	Train & support the organisation		Quicker insights into buyer	Challenge buyer			
G			Consultative selling					

Fig. A5 Search areas

6 Buyer archetypes explained.

6.1 Summary

Structured Sophie

- Goal; Efficiency in development through routine. Short-term collaboration.
- Need; Wants to be unburdened because of lack of competence, resources, or new insights.
- Competence level; Familiar with product development.
- Development complexity; non-strategic assignments, with well-known technologies and existing knowledge.
- Requested proposal; Clear scope, Low risk activities, fixed price.
- Relationship investments; Little investment in future plans and improvement of relationship. No IP is developed.
- Contact: Operational contact, involved in the project on a product level. E.g., lead engineer, project manager at an SME.
- Information exchange; Formally the minimum amount of narrow information. Informally high quantity of contextual information.
- Boundary spanning interaction; Not interdependent of supplier. Work separately on development requests.
- Relationship climate; Positive interaction and reputation with same contacts. No early-stage involvement, so no close collaboration.

Pragmatic Pete

- Goal; Cost-effective product development for realization. Short to mid-term collaboration.
- Need; Wants the development request achieved within scope and budget.
- Competence level; Familiar with own development expertise and manufacturing competence, but not with integral product development of supplier.
- Development complexity; Important and complex assignments based on mature technologies.
- Requested proposal; Structured approach, transparency regarding investment, a competitive proposal of product costs, limited room for exploration or knowledge development, fixed price.
- Relationship investments: The supplier over-delivers in order to win the assignment. The mature technology and proprietary knowledge result in little to no innovation or IP.
- Contact: Mid-level contact who is responsible for managing product development and delivering outcomes for a business case. E.g., project manager or R&D manager at an SME with production facilities.
- Information exchange; Formal and limited information exchange. Few mutual visits, mostly from the supplier to the buyer.
- Boundary spanning interaction; Coordinating and alignment of project management on both sides. Ensuring that the supplier remains within scope (e.g., activities, hours, and costs).
- Relationship climate; Tense climate. No early-stage involvement. The supplier over-delivers due to the competitive field, and the buyer has a strong negotiation position. Plenty of pressure on the supplier, misaligned expectations, and distrust.

Equal Emily

- Goal: Team up to strengthen each other, knowledge and in developing and realizing products. Mid to long-term collaboration.
- Need; A trusted, knowledgeable, renowned partner with equal stakes and motivation to create a commercially viable product.
- Competence level; Commercial responsible, some familiarity with integral product development, inhouse design and testing capabilities,
- Development complexity; Strategic project, part of buyer's core. Complex product development, mature and immature technology, translation towards industrialization
- Requested proposal; Proposal show long-term intention, clarity regarding responsibilities and role. Multiphase approach and project management explained. Reporting and infrastructure integration proposed. Shared investments and costs.
- Relationship investments; Mutual high investment in future plans and improvement of the relationship. Clear agreements are required about generated IP and ownership.
- Contact; Top-level contact focuses on the buyer's success. Develops long-term relationship, makes the final decision, keep track of development and monitors risks. E.g., PMO, Business leader, CEO/Owner at an SME, start/scale-up and in some cases, MNC.
- Information exchange; Frequent and rich information is exchanged. Information is shared through integrated infrastructure for communication and collaboration. Lots of time and effort mutually invested in coordinating collaboration.
- Boundary spanning interaction; Mutual high dependency. Early-stage involvement. Collaboration starts unstructured. Joint coordination of tasks and handling challenges.
- Relationship climate; High mutual trust by transparency, with a long-term commitment. The buyer feels that they are treated fairly by supplier. Extensive joint actions. Tensions are resolved collaboratively.

Contract Chris

- Goal; Fulfilling development needs and creating new knowledge. Mid to long-term collaboration.
- Need; Wants a trusted supplier to fulfil the buyer's lack of competencies or resources.
- Competence level; Very familiar with product development, own R&D department, Focus more on the research of their specific proprietary knowledge (e.g., technology, market, user needs)
- Development complexity; Low important project, non-strategic or not part of buyer's core. Complex product development, mature and immature technology, translation towards industrialization
- Requested proposal; Agreements on activities and project management, changing scope, high-risk activities, room for exploration (costs for learning), investment based on actual costs.
- Relationship investments; Moderate mutual investment in future plans and improvement of the relationship. Clear agreements are required about generated IP and ownership.
- Contact; High-level contact, monitors projects, create plans and business models and maintains the relationship. Report to top management. E.g., R&D manager, innovation manager, PMO at an MNC.
- Information exchange; High level of detailed and continuous communication.
- Boundary spanning interaction; Semi dependent on the supplier. Collaboration with a structured and integrated approach to manage risks and outcomes. Monitoring performance and project management.
- Relationship climate; High mutual trust, limited per joint collaboration. Strong, flexible relationship, but no exclusivity. Supplier is involved in forward planning.

6.2 Detailed description

Structured Sophie - “We can find you easily, that is why we appreciate you as a supplier”.

Goal: This buyer archetype is looking for a routine supplier. The buyer-supplier relationship will be that of market exchange. Meaning that the aim is to optimise for efficiency, and both parties make low specific investments in the relationship. This can relate to the interaction process, collaboration, or costs. This buyer has short-term planning, so there will not be a lot of forward planning. This buyer seeks a supplier who can help unburden the lack of resources by means of a specific competence.

Competence level: The buyer is familiar with product development. However, they prefer to focus on understanding their users and other aspects of the innovation process. The buyer lacks certain competencies or resources since it is not in their business' core or requires a new perspective on their matter. However, the goal to achieve is important enough for the buyer that the request is developed.

Development complexity: The development request is not of the strategic importance of the buyer. The request is, according to Stacey, an assignment based on a certain known technology and a clear stakeholder organisation. No new knowledge is being developed, and hence little innovation takes place.

Requested proposal: The development assignment includes routine (relatively simple) activities and provides new insights within a clear scope with little risks of additional work and costs. It is expected that the proposal is offered with a fixed price since the risks are controllable. The buyer expects that the agreements are met before a supplier does additional work to inspire and challenge the buyer. Additional work will result in a new proposal.

Relationship investments: Both parties invest little in future plans and the relationship to further improve coordination, information and knowledge exchange. The buyer has a clear policy regarding IP. Either IP is preliminarily checked and protected, or IP is not of relevance for the buyer because the developments are based on existing knowledge.

Contact: This buyer's contact is closely involved with the project and works on a product level, which means that the role of this contact is most likely that of a Lead Engineer, Project manager or R&D manager. When the contact is directly involved in the product development, the buyer is most likely an SME organisation.

Information exchange; Formally, the buyer and supplier exchange only narrow and limited information. There is only heavy exchange regarding the product during

the conversion phase and the kick-off of the project. As a result of the routine, an interpersonal relationship is established, including high levels of trust. In this relationship, the buyer exchanges a high quantity of contextual information.

Boundary spanning interaction: The assignments of this buyer are high in routine and have a clear structure/project brief. The buyer is not interdependent of the supplier. The buyer and supplier can therefore work separately. Hence limited time is spent directly with the developers of the supplier. The buyer expects to be unburdened. Continuity of involved supplier employees ensure an efficient process before project kick-off and do not require introduction in the way of working.

Relationship climate: There is a positive interaction between the buyer and supplier, often with the same contacts. However, there is no joint effort and cooperation. The supplier is not involved in the early stages of the projects, the strategic decisions, or the design brief. Therefore the supplier only receives formally the minimal required information to perform the service. The supplier has a positive reputation and track record with the buyer because of the efficient routine and interpersonal relationship. Therefore, the supplier is treated fair regarding costs and planning.

Case study examples are routine, low risk, clear scope, short term projects. For example facelifts of the same product design, altering models to the design family, making renderings, explorative design sprints for new concepts.

Pragmatic Pete – “The product development agency rather works on complex challenges, than work on this relatively simple project”.

Goal: This buyer archetype is looking for a leverage supplier. The buyer-supplier relationship is based on a captive supplier, which means that the suppliers' specific investments are high to remain relevant and competitive. The buyer aims for short to mid-term planning to achieve their goal. The buyer seeks to get the important input from the supplier in a cost-effective way.

Competence level: The buyer is in many cases not experienced with the integral product development approach or specialisation of the supplier. However, it is familiar with its own part of research & development, such as a specific material, electronics, or software. This buyer often has their own production facilities. They have particular knowledge regarding their production competence and conventional insights regarding market trends and customer needs. The buyer creates pragmatic solutions and is not seeking to create additional value. The buyer does not have an interest or resources to further explore added value for their users.

Development complexity: The development request is important for their product or service. However, the solution provided by the supplier is based on well-understood technologies and knowledge but need certain customisation for the buyer's request. The development assignment can be complex but involves low risks since the customisation is based on applying well-known knowledge. Hence no effort needs to be invested in generating new knowledge, and little innovation occurs.

Requested proposal: The development request is of high importance to the buyer. However, many suppliers can meet the buyer's needs. Therefore, the buyer has a strong position to negotiate lower costs. In response, the supplier invests in winning and keeping the business with the buyer. Due to the competitive field, the buyer makes decisions based on the lowest development costs and product costs. In a proposal, they are looking for a realistic estimate of product costs and a fixed price for development. To mitigate any remaining risks, the buyer expects clarity in the proposed approach and transparency in achieving the development goal. This approach leaves limited room for experimentation and learning. Additional activities result in scope change or are tried to accomplish within the fixed-price agreement. The goal is often a product ready for manufacturing with a certain product price.

Relationship investments: The supplier invests more in the relationship to win the assignment than the buyer because of the captive supplier relation. Resulting in an overdesigned relationship, which may lead to misaligned expectations in the future. The development request is focused on proven technology and knowledge in

combination with the proprietary knowledge of the buyer; therefore, not much IP can be developed by the supplier.

Contact: This buyer's contact operates at a medium level in their SME organisation and is responsible for delivering a product that fits a certain business case. They are a project manager, R&D manager, or buyer. They can exploit their purchasing and negotiation power to ensure an optimal investment. Hence, they expect transparency about the costs (cost price of product) and lead time till realisation. They experience lots of freedom to make decisions regarding development and suppliers but are not always familiar with integral product development.

Information exchange: The buyer and supplier have little exchange of information. The information is mainly about project management and investments. Only a few mutual visits take place. In case this occurs, it is mainly from the supplier to the buyer.

Boundary spanning interaction: The buyer does not have a lot of time allocated to meet with the supplier. The contact is mostly about coordinating complex tasks such as ensuring that there is alignment between the project management of the supplier and buyer. It could be described as the buyer micromanaging the activities of the supplier to remain within budget and scope.

Relationship climate: There is often a tense climate between the buyer and supplier. As a result, trust is not mutual. Since the development is important to the buyer and they also participate in the development, the supplier is not involved in the strategic decisions or the initial design. Collaboration often starts with a generic project or pilot. Because of the competitive market, there is pressure put on the supplier to overdeliver.

Consequently, this sets the wrong expectations for a potential follow-up. In turn, the reputation of the supplier varies between good and bad. The supplier over-delivers and is used to deliver value; however, the buyer only expects the bare necessities at a low cost. This distrust causes a mismatch between buyer and supplier.

Case study examples are custom designing and developing custom housings. In many cases, the business case of production is connected to this project or assignment. Other examples would be solely front-end development and user-testing. It does not fit the integral competencies of Pezy Group.

Equal Emily – “Expecting to reach the set goal together, in which the supplier is trusted to assertively deliver their part and in collaboration”.

Goal: This buyer archetype is a partner. The buyer-supplier relationship is based on strategic partnership, which means there is high importance of purchasing and high complexity of the supply market. The challenge of finding a supplier for strategic development results in the need for a long-term partner. Both buyer and supplier invest unusually high assets in the cooperation. The partnership spans multiple stages, from ideation to manufacturing.

Competence level: The buyer is commercially responsible for the product's success and consequently develops a lot of knowledge regarding their customer needs and the proposed solution. Hence the buyer has, to varying degrees, in-house design and testing capabilities. However, the buyer focuses on the business proposition rather than the development. Because of the substantial lack of resources, a partner is required. The buyer has a certain understanding of product development but still requires guidance and advice. In addition, the buyer needs a strong development supplier who can create new functionalities and is active in research and innovation—the need for a partner with recognised skills and capabilities in design, engineering, and manufacturing.

Development complexity: The product requires a high level of customisation. The development lies close to the buyer's core competency. The complexity of the product, which is partly based on new technology, stimulates innovative solutions. Many design changes occur during the development because the technology is not mature, and plenty is still unknown.

Requested proposal: Buyer and supplier collaboratively develop complex products which are close to the buyer's core competency. Hence clarity is required about responsibilities and roles. Often the supplier is responsible for development & realisation, whereas the buyer is responsible for the commercial success of the developed product. The multiphase project is based on innovating technology, a product, or a process. The process endures many design changes. Therefore, a supplier with strong design and engineering capabilities is asked to join as a partner. The supplier is responsible for the realisation and hence the project management. The buyer who remains commercially responsible for the product's success demands accurate development forecasting since it requires large investments.

Relationship investments: Both parties make unusual high investments in future plans and relationships to further improve coordination, information, and knowledge exchange. Since the development request is based on many unknowns, the new technology is built-in cooperation between the buyer and supplier. Clear agreements must be made regarding the creation and

ownership of IP and accountabilities.

Contact: The contact of the buyer focuses on developing a long-term relationship. The contact, most likely someone from the top level, could be a PMO, business leader or CEO/CTO. The contact between the buyer and supplier can take place at an ownership level. In most cases, the organisation is either a start-up/scaleup or an SME. The contact makes the important make-buy decisions, keep track of developments and risk analysis. Due to the missing competence and frequent business changes, a large commitment of a long-term partner is required.

Information exchange: The buyer and supplier spend a lot of time coordinating the issues a partnership can bring. The shared information is frequent and rich. The buyer must have a strong infrastructure integration with the supplier. Regular mutual visits take place. Standardised rules and procedures help in collaborating.

Boundary spanning interaction: The supplier is involved early in the process. The project brief and scope are formed together. Hence, in the beginning, the partnership is not structured. The way of working is not based on routine and involves frequent unexpected events. A large amount of time is invested in supplier and coordination issues and tasks. In a partnership, ideas about future plans and improvements are exchanged between buyer and supplier.

Relationship climate: A partnership most often will not take place if the supplier has a bad reputation. Therefore, the buyer is looking for a supplier with a good reputation. There are high mutual trusts and commitment in the buyer-supplier relationship. The buyer feels that they are being treated fairly by the supplier. The supplier is early on involved in strategic decisions and design. Extensive joint actions and cooperation take place in the partnership. However, in partnership, tensions arise regarding cost, cost structure, product design, quality, inventory etc. These are often resolved collaboratively.

Case study examples are participating projects like start-ups or well-established long-lasting relationships. Projects include IPD, many competencies and multiple business models. There is a sense of giving and taking.

Contract Chris – “We build on the appreciated experiences, which complement and challenge us”.

Goal: This buyer archetype requires a bottleneck supplier. The buyer-supplier relationship is based on a captive buyer. Meaning that the buyer is held hostage by the supplier because they can provide a service that is hard to come by. The supplier is free to switch to other customers, but the buyer needs them to fulfil a certain need. Fulfilling this less important development request is still required but often does not include strategic projects. For example, enabling products.

The buyer aims for a mid to long-term relationship due to the nature of developing complex innovative products. In some cases, it is a strategic project, but the buyer does not have the resources to develop it themselves since it is not part of their core business. In other cases, projects are in or outsourced based on strategic importance, convenience, or the lack of resources. As a result, the buyer becomes dependent on the supplier, hence a bottleneck.

Competence level: The buyer is, in most cases, very familiar with product development. However, the buyer's R&D department lack certain resources, such as specific competencies or the means to transform their knowledge into realisable products. In some cases, the buyer only focuses on research and creating proprietary knowledge, which is not applicable yet for commercialisation.

Development complexity: The suppliers can offer solutions for technically complex products based on new technologies and functions developed by the supplier. Besides the buyer's mature proprietary knowledge, the adaption of well-known knowledge is applied in these projects. Either way, the development request requires a significant engineering effort, which means that according to Stacey, the projects can range from FEI to NPD or IPD projects and, in some cases, FEI. New knowledge is developed and result in product innovations.

Requested proposal: It is rare that a supplier is involved from start to finish. Only a few suppliers can meet the need of the buyer. Therefore, the supplier is in a strong position to negotiate. In response, the buyer tries to ensure and protect certain outcomes through contracts. The proposal includes a well-structured and manageable approach. Nevertheless, the proposal includes some room for exploration and creativity. Concluding that this proposal emphasises the costs of learning, creating knowledge. Hence the proposal indicates an estimated required investment but is finally based on actual costs.

Relationship investments: Both parties invest moderately in future plans and the relationship to further improve coordination, information, and knowledge exchange. Since the development request is based on proprietary and new technology built in cooperation between the buyer and supplier, clear agreements must be made

regarding project management and the creation and ownership of IP.

Contact: The contact of this buyer operates at a high level in their organisation. The organisation of this buyer is often a multinational corporation. The contact has controlling tasks like monitoring projects, negotiating or maintaining relationships with suppliers, and making (back-up) plans. Therefore, they make planning and overviews of projects. In addition, the buyer is responsible that the developed product conforms to a certain business case they also help develop. Their function could be that of a head of department, R&D or innovation manager, portfolio manager, Group leader or PMO. They report to the top executive level about the products, business cases (propositions) and development statuses.

Information exchange: There is a high level of communication. Which included the exchange of important and detailed information on a continuous basis. Frequent and regular mutual visits take place.

Boundary spanning interaction: The project and assignments are structured tasks often integrated with a gateway approach, increasing the predictability of the project's risks and outcome. The activities are broken down into manageable and well-understood steps and procedures. The buyer spends a lot of time meeting with the supplier's developers and project managers. During these visits, the activities between buyer and supplier are coordinated. The task is mainly focused on controlling the supplier by negotiating contracts and monitoring their performance.

Relationship climate: This relation exercises high mutual trust but is limited per joint action and cooperation. The buyer shows a strong effort to cooperate and build a long-term relationship (forward planning). The structured approach allows the buyer to mitigate risks but requires patience because of their slower (bureaucratic) pace. Another way of mitigating risks is not to build exclusive relationships with suppliers. Therefore, the buyer will aim to establish strong relationships by contracts and explore other suppliers and rotate cooperation with them.

Case study examples are multifaced integral product development. It is the core of Pezy Group and regards the development of complex customer products.

6.3 Customer orientation principles

Structured Sophie

This archetype requires structure and convenience. To establish efficiency for convenience, a routine interaction is required, focusing on a straightforward transaction or market exchange. Many other suppliers in the supply market compete to support the buyer in their low risk, clear scope development request. The cooperative relationship for achieving the development goal is based on short-term projects which must be offered in a structured way without any unclarities.

To be customer-oriented for Sophie means;

- Being completely unburdened by well-defined and structured proposal and project approach.
- Clear expectations of deliverables and characteristics.
- Proposal is offered at a fixed price.
- Clear agreements build on previous experiences.
- Continuity of involved supplier employees to enable:
- Efficient communication by approachable contact;
- An effective way of working because introductions are not required.
- Early prediction regarding scope management, knowing when the project is finished and whether an additional project is required to achieve the intended goal.

Pragmatic Pete

The goal of Pete is to achieve realisation pragmatically and cost-effectively. The buyer has a strong negotiation position since many suppliers can fulfil their goal, forcing them to propose competitively. Pete is not familiar with the competencies of the supplier. However, the development of manufacturing is important for them. There is only a cooperative short-term interaction for developing the low-risk solution.

To be customer-oriented for Pete means;

- Provide a quick estimation of lead-time, development and product costs.
- Offer a pragmatic approach, indicate which activities are skipped.
- Substantiate proposal and emphasise consequences of quality by offering a pragmatic approach.
- Providing the buyer with options and transparency in proposal calculations to make them feel in control.
- Require guidance and explanation of the competencies and approach of the product development service of the supplier.
- Manage expectations regarding the development of the proposal via frequent updates.

Equal Emily

The strategic partnership between the supplier and Emily requires a strong relational interaction. The goal is to collaboratively achieve a set goal, in which the supplier is responsible for delivering on their part; product development for realisation. The supplier and buyer require a lot of inter-organisational trust, which allows the division of responsibilities. Emily requires high investments of both parties to establish an infrastructure to design the complex, high-risk solution in alignment with each other.

To be customer-oriented for Emily means;

- Showcasing the supplier's expertise and track record of complementary competencies enables the supplier to guide the buyer on specific aspects (e.g. application knowledge, development process).
- Continuity in boundary-spanning contact makes them feel like a priority in the interactions and communication.
- Comparable investment and commitment in joint development that is expressed in a proactive and assertive attitude.
- Propose infrastructure integration for communication, collaboration, knowledge sharing.
- Because both parties are invested in achieving the goal, the supplier can go over and beyond to develop solutions that add value to the goal.
- Management of expectations through risk management and project forecasting.

Contract Chris

Chris is a captive buyer interaction in which the buyer does not have many supply options to fulfil their product development need. In a collaborative way, the employees of both the supplier and buyer will work on high-risk projects that include many unknowns. A relation must be established for the mid to long-term in which the supplier can add their specific value. For the buyer to ensure they manage the supplier and the required outcome contracts are put in place.

To be customer-oriented for Chris means;

- Assurance that the supplier can deliver their specific expertise and value in the long term through contract.
- Expect a clear explanation in the proposal of how the supplier will manage the project and risks, budget forecasting and how the deliverables with a certain quality are achieved.
- Require an integrated infrastructure, with preferably a continuation of introduced supplier employees, to provide structured communication and documentation in order to justify decisions to the buyer's internal stakeholders
- Expect patience and understanding when the buyer needs to manage expectations, get approval in their bureaucratic process.
- Challenge and inspire the buyer for other development trajectories which might add value to the buyer's organisation.
- Propose plans and suggestions on how to expand the collaboration and inclusion of the supplier for long-term project planning.

From the brainstorm session with the participants to determine the customer orientation principles, possible requirements to enhance the relationship or move the relationship to another preferable archetype became apparent. The so-called "Enhance relationship opportunities" can be found in the appendix (7).

7 Enhance relationship opportunities.

Through the brainstorm with the participants, some options became apparent to enhance the case study Pezy Group's current archetype relationship.

Structured Sophie

- Clear contact and communication process
- Standardized way of working
 - Suggest visiting each other more often.
- Standardized proposals
 - The fixed prize, sprints, strip card agreements
- Framework agreement
- Trust is established enough to introduce the next step. Expand supplied competences
 - From assignments to projects
 - Open for joint ventures
- Provide indications about a potential follow-up
- Do not push other competencies or services.
- Introduce continuous buyer team/contacts
 - OS is the main contact; AR checks proposals and relationships.

Pragmatic Pete

- Manage expectations well, do not deviate from goal, stay within scope.
- Do not try to nudge the buyer into another direction, creating more value by making the proposal bigger
- Standardized offerings, fixed price
- Give/discuss options for several approaches and thus different prices.
- Do not bring operational support to the first introductory meeting. Keep involvement of operational support to a minimum.
- Discuss project importance, question experience and knowledge regarding development.
- Project management is split, therefore make clear arrangements regarding responsibilities
- Try to be involved earlier, achieve project management or well-defined phases.
- Clear split between development and realization
- Introduce to Pilot Factory concept or manufacturing network > other agreements (partnership)
- Try to avoid these buyers. Convince that negotiating over costs is not possible, Pezy Group will not overdeliver just to win buyers. Nudge towards being a bottleneck supplier and capture development in the contract.

Equal Emily

- Guide and advice in the integral product development process or on specific topics (e.g. circular design)
- Think along with strategy and how to create maximum value
- Invest in the relationship; get to know each other
- Set up core team existing of AR, PM, and specialist. Introduce not too many people. There will be collaboration, but with one point of contact. A total buyer team is not required. In partnership, a supplier has more freedom.
- Plan scoping sessions to ensure alignment on goals, deliverables and boundaries.
- Invest in knowledge application; Hire people, market research, train competences
- Integral approach of multiple competencies and business models. Including user, product, and customer
- Search and include partners to achieve the joint goal
- Show willingness to invest in a partnership, but indicate reciprocal expectations.
- Ensure that DMUs, e.g. ownership level, meet and discuss long-term opportunities and goals.
- Show flexibilities in collaboration. Do not emphasise limitations of current infrastructures, structures and processes.
- Ensure how to deal with uncertainties, develop new functionalities, experience in the development process.

Contract Chris

- Apply high specific knowledge and expertise.
- Showcase expertise and experience through similar cases.
- Invest in researching buyer (annual report) and domain to bring new knowledge and ideas that fit with their strategy
- Introduce continuous buyer team (collaboration) for the large account that can become key accounts
- Include follow-up steps for forward planning
- Try to surprise buyers by overdelivering on quality or scope. However, this cannot influence the planning. It is an investment to show the supplier is open to partnerships.
- Plan frequent meetings and visits to maintain

relations.

- Plan scoping sessions to ensure alignment on goals, deliverables and boundaries.
- Invest in knowledge about other suppliers and how to differentiate from them.
- Ensure understanding of not knowing and exploration in the development process.

Opportunity: Most customers have a market exchange or captive buyer relationship with the case study, Pezy Group. The strategic partnerships of Pezy Group have been solely based on superior development competencies and capacity. Not on application knowledge. The application knowledge Pezy Group have must relate to the target domains and potential growth buyers. Based on the application knowledge which Pezy Group developed themselves, and must invest in expanding this knowledge to better fit these customers and their goals and ambition. This could be enabled by, for example, internal projects. Consequently, the Pezy Group can better guide them, provide insights from the application knowledge and thus become better, trusted long-term partners.

However, it is not required to enhance every buyer-supplier relationship to another archetype.

8 C-BOX.

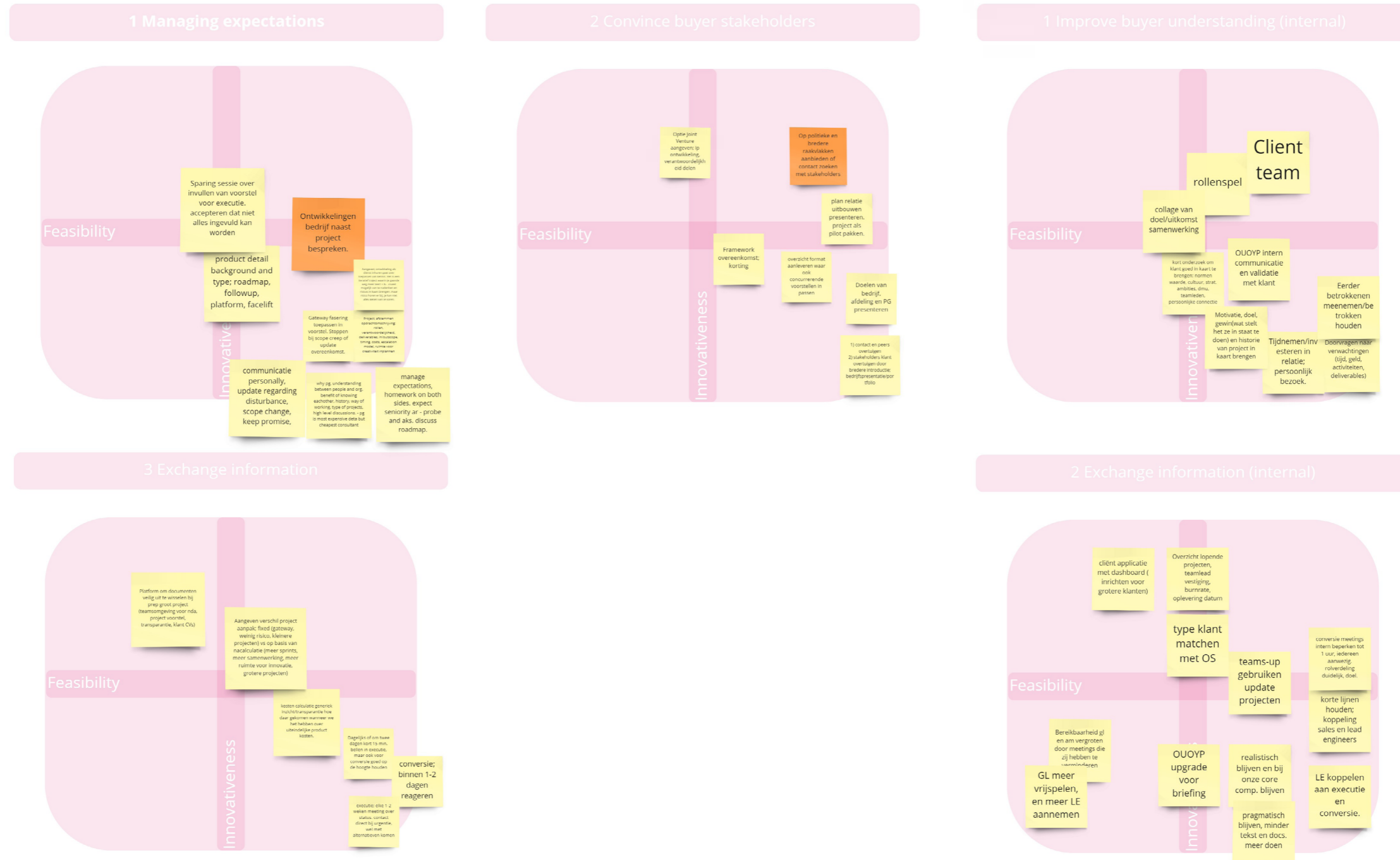


Fig. A6 C-box

9 Validation concept customer journey.

The concept of the Sophie archetype specific customer journey is evaluated by the participatns. Resulting in a validation wether the concept needs a redesign.

9.1 Concept

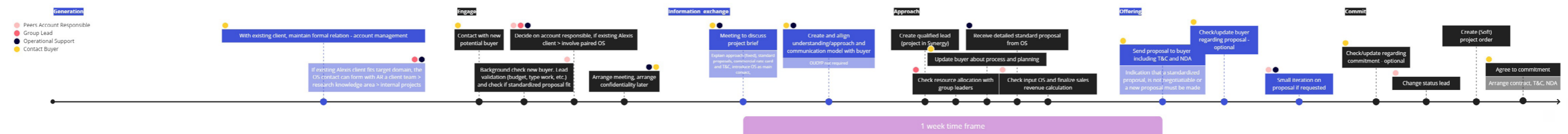
Case Pezy Group

Concept specific Customer Journey focussed on archetype Sophie

Timeline - Buyer



Timeline Account Responsible (AR) - Supplier



Timeline Operational Support (OS) - Supplier

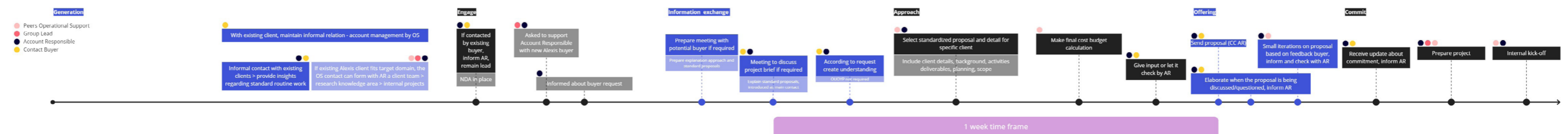
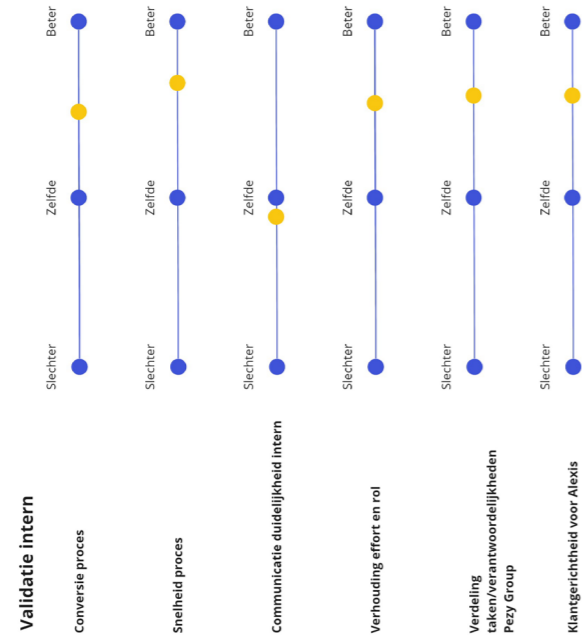


Fig. A7 Concept customer journey for Sophie

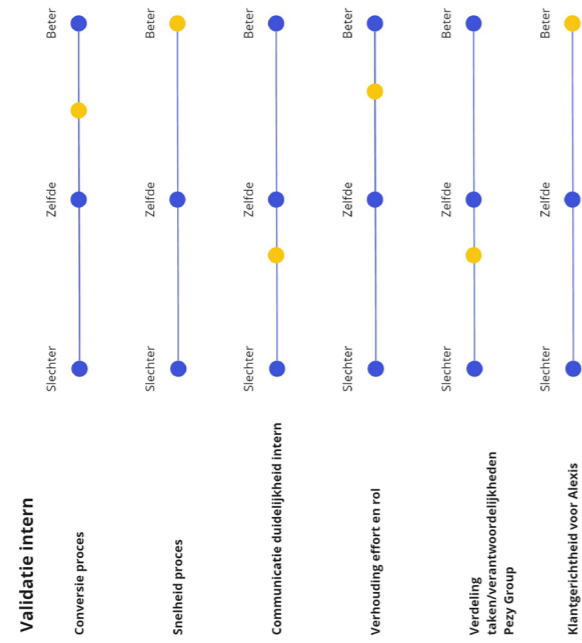
9.2 Validation sheets

The customer journey concept for archetype Sophie is validated by numerous Likert-scales. A participants are the account managers from the case study supply organisation. O participants are the operational support employees from the case study supply organisation. The B participants are the buyers or customers.

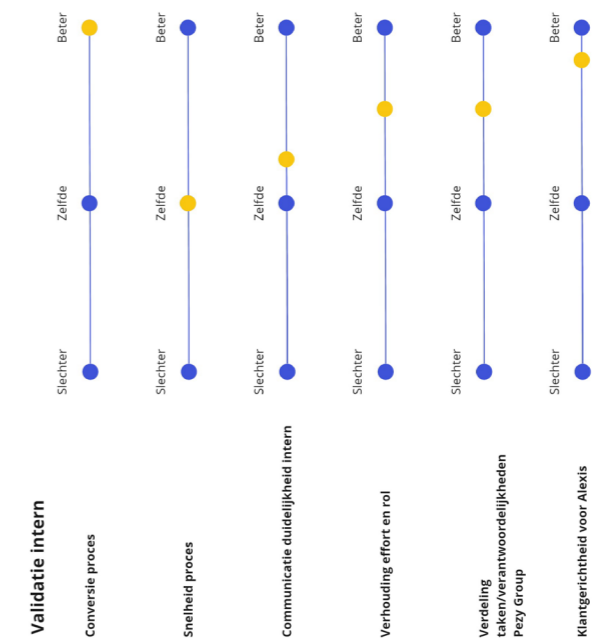
Participant: A_2



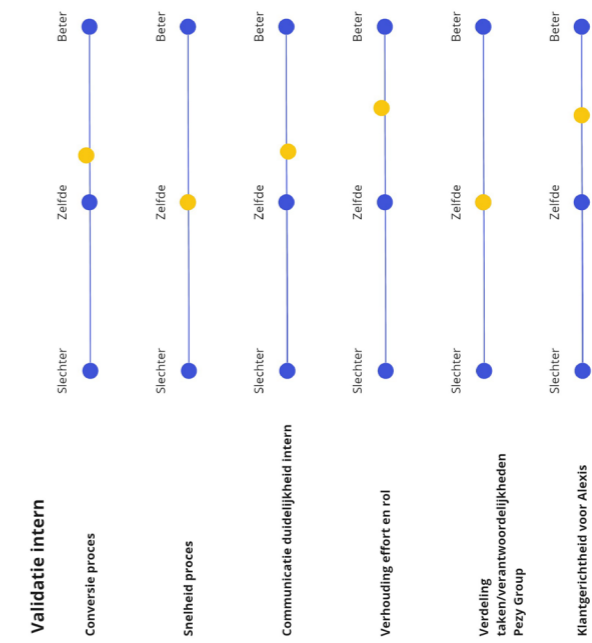
Participant: A_1



Participant: A_4

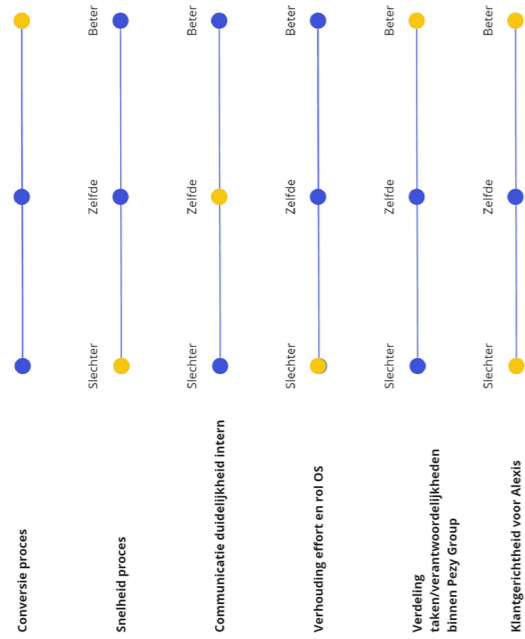


Participant: A_3



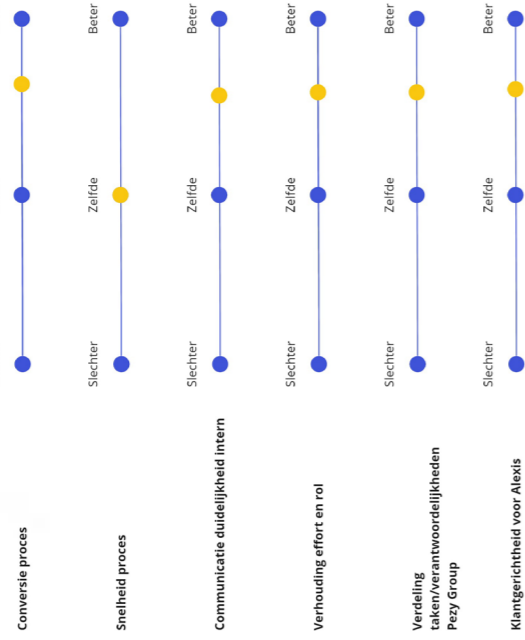
Participant: O_1

Validatie intern



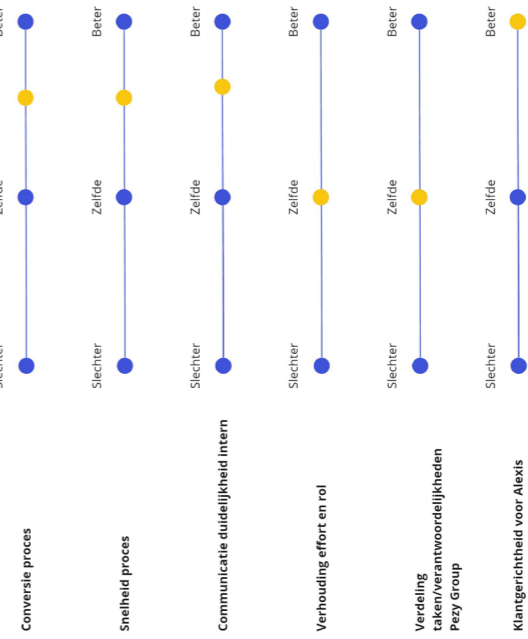
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Validatie intern



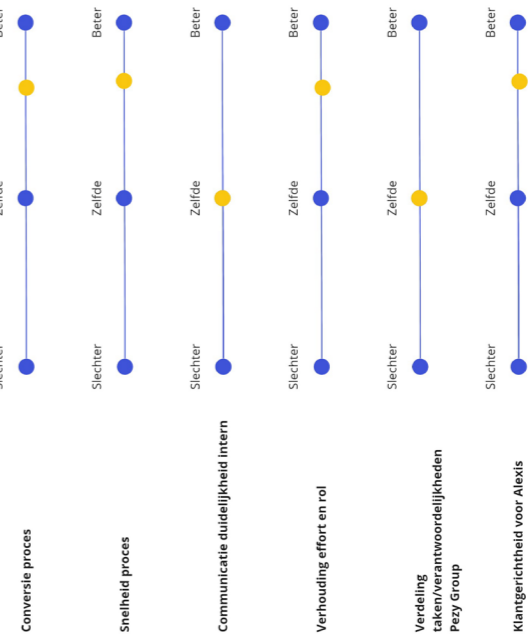
Participant: O_3

Validatie intern



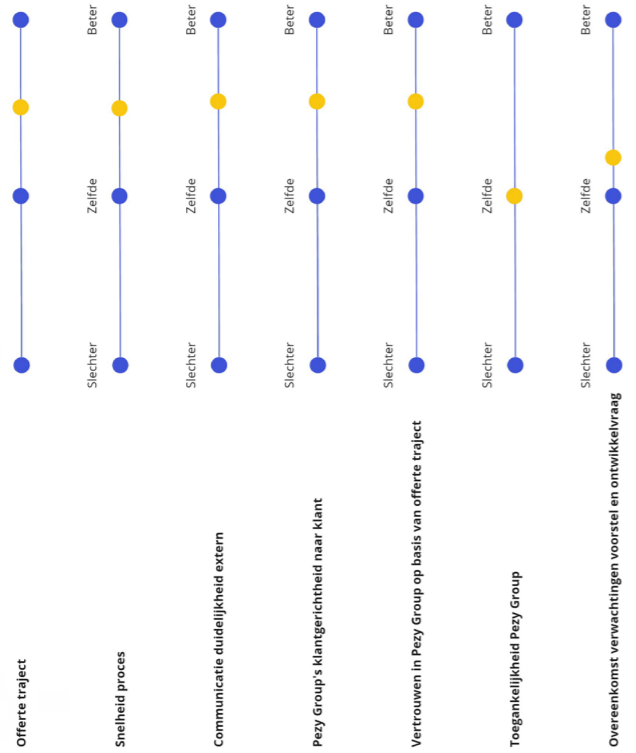
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Validatie intern



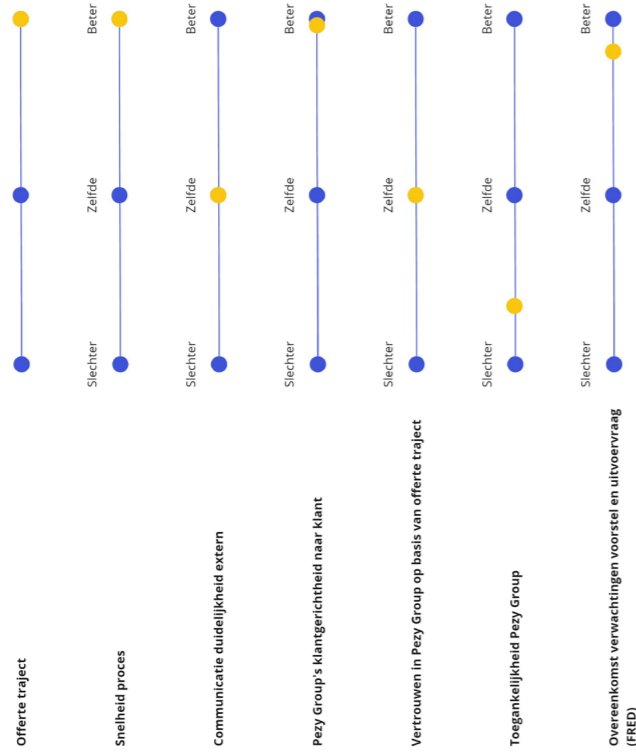
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Validatie extern



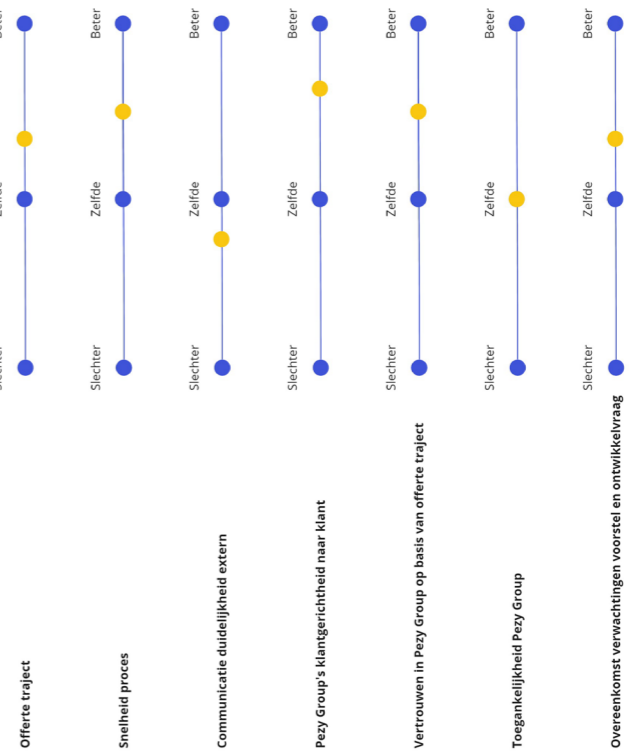
Participant: B_2

Validatie extern



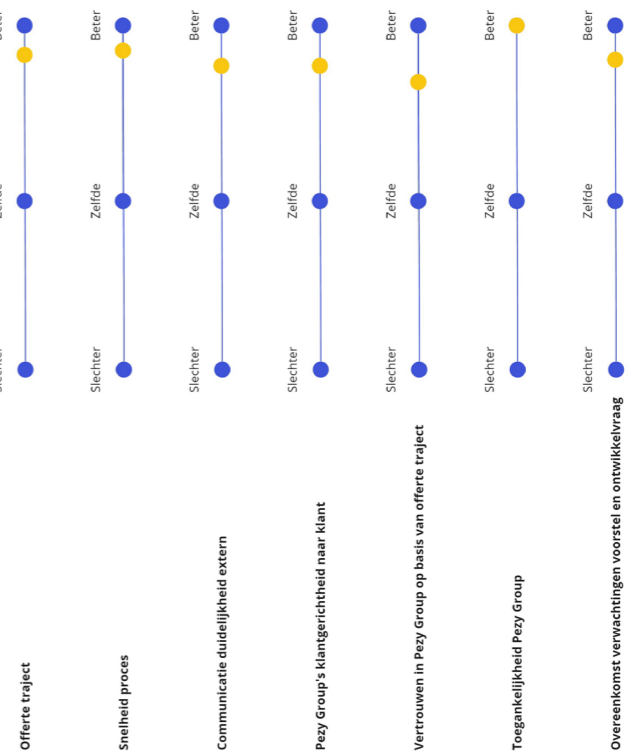
Participant: B_3

Validatie extern



Participant: B_4

Validatie extern

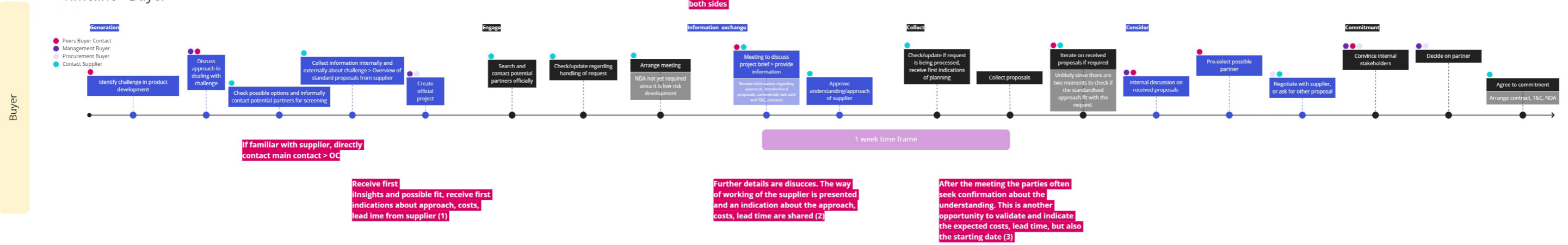


10 Deliverables

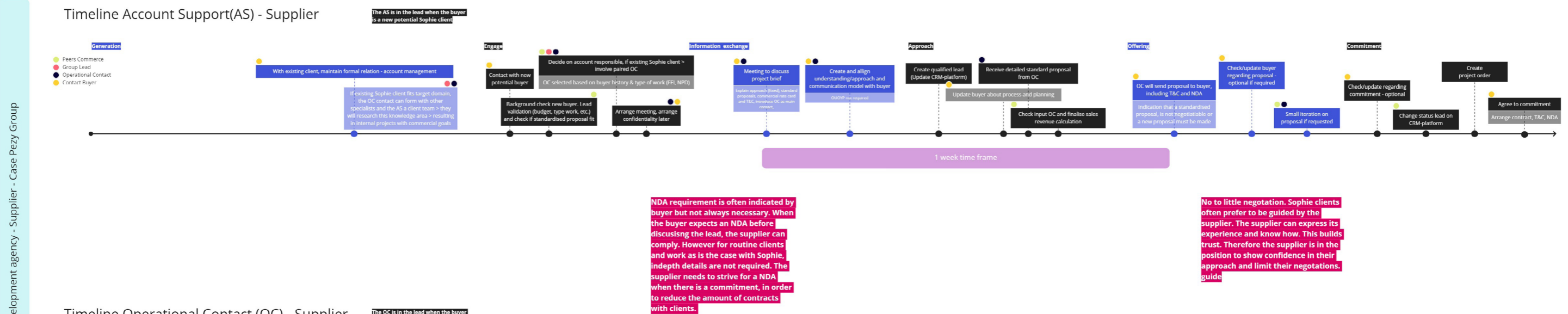
10.1 Archetype specific customer journey

Case Pezy Group Redesign specific Customer Journey focused on archetype Sophie

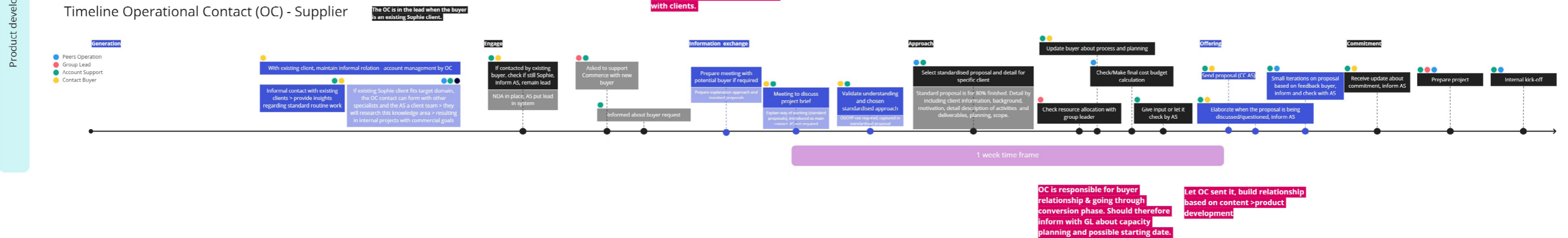
Timeline - Buyer



Timeline Account Support(AS) - Supplier



Timeline Operational Contact (OC) - Supplier



Case Pezy Group
Communication and escalation model between Supplier and Buyer archetype Sophie

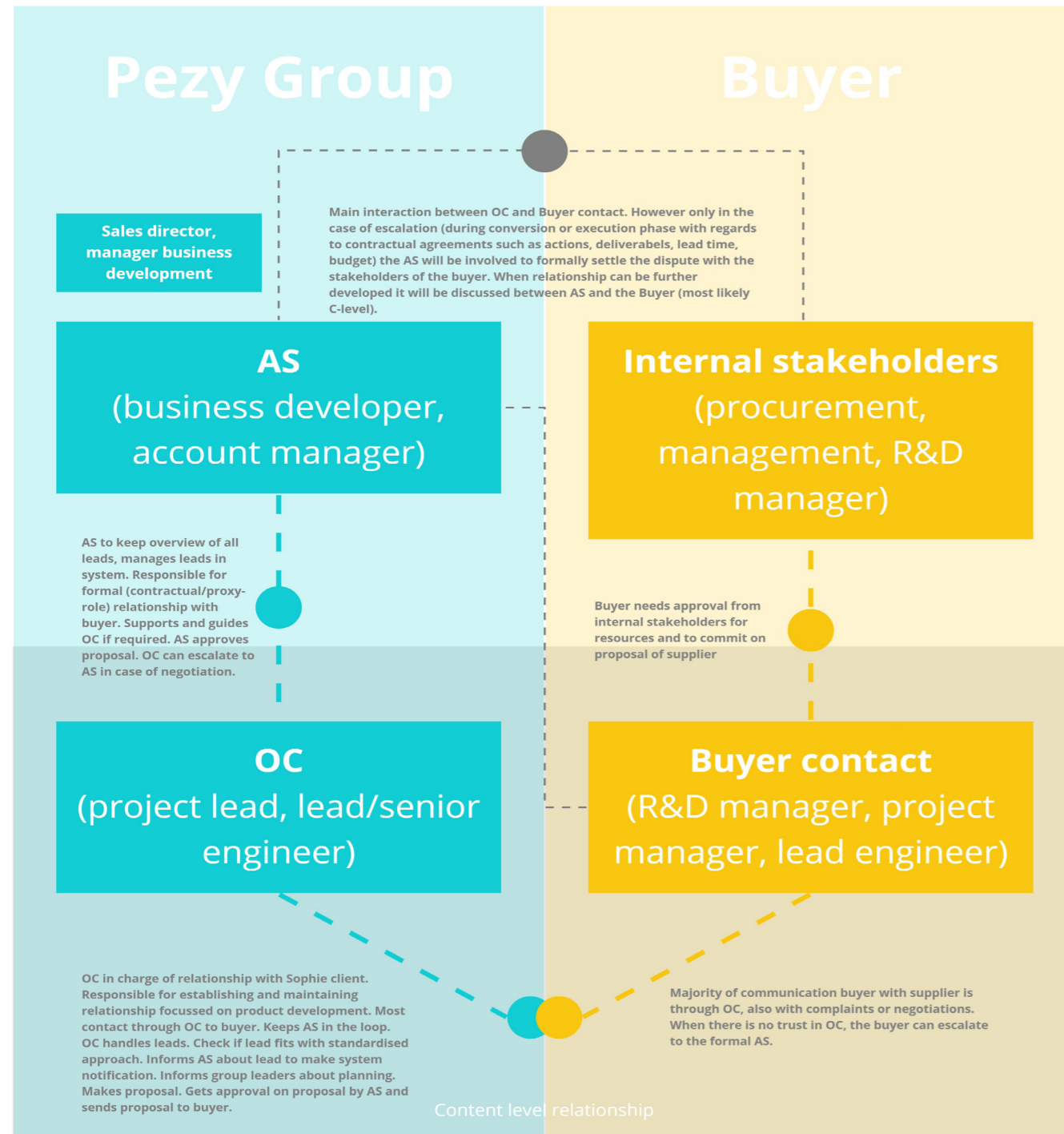
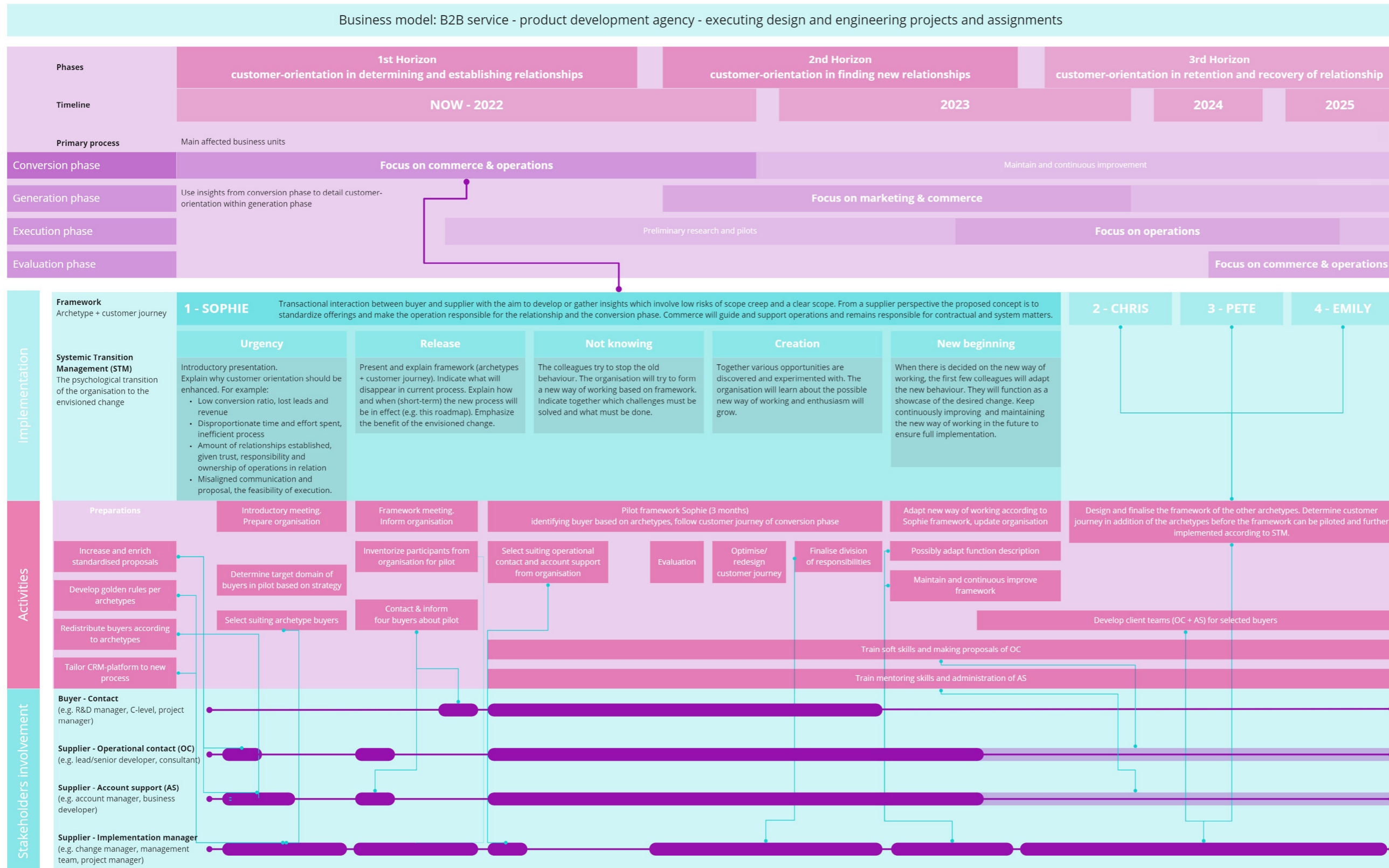


Fig.A9 Communication and escalation model between buyer and supplier (Pezy Group)

10.2 Implementation roadmap

Case Pezy Group - Roadmap for supplier - implementing the customer orientation framework of SOPHIE



2025
framework fully implemented for all archetypes in all phases

Recognising the unique customer and their common needs, Knowing how ones role influences the relationship, and thus understand how to best service their designated client.

- Conditions**
- OC will receive time to spend on assigned buyers
 - During pilot, recurring feedback sessions with management take place
 - In addition to framework implementation, the supporting communication and escalation process model must be followed
 - OC always informs AS with regard to buyer interaction and created content
 - CRM platform is in place and managed by AS
 - AR is proxy, formally responsible for binding documents
 - Standardised proposals, calculations and other documents created during the conversion phase are added to CRM platform

Fig.A10 Roadmap for Pezy Group to implement customer journey Sophie and other archetype specific frameworks

11 Future research - Interpersonal customer orientation.

As described by Jeong & Hong (2007), customer closeness is the organisational and individual commitment in the interaction with customers and identifying their needs. The final framework that is designed to enhance the customer orientation of the supply organisation's process in the buyer-supplier dyads cannot ignore the personal aspect of customer orientation. Albeit this research focuses on supporting and enhancing the customer orientation of the organisation, this part will shortly address the importance of including employees in future research.

As described earlier, organisations need to embrace customer orientation by identifying and fulfilling current and future customer needs. Organisations will not reach their full potential unless employees have superior skills in understanding, satisfying and retaining customers (Day, 1998, p.2).

Boulding et al. (2005, p. 161) emphasise that employees are an integral part of implementing CRM initiatives and should deserve the organisation's attention. The internal (employees) and external customer orientation contribute to increasing the market orientation of an organisation (Conduit & Mavondo, 2001). Conduit & Mavondo (2001) explain how training the employees, an effective communication system and managing HR are critical in establishing internal customer orientation. Even employees who are not customer-facing should also perform in a customer-oriented manner when supporting or serving internal customers. In the case of Pezy Group, not all operational support interact with the customer directly. However, following the argumentation of Conduit & Mavondo, they should still act customer-oriented to the employees facing the customer, such as account responsables.

Teamwork, knowledge sharing and learning are requirements of developing customer orientation. The organisation should have the ability to develop its competencies based on these learnings from customer interactions (Brannback, 1999 p8). The service quality is a result of the buyer-supplier relationship in which the customer and employee interact. In essence, the

customer knows why they want the service, and the employee should know how to provide a fitting solution to the needs. Hence, this knowledge creation and sharing are important to monitor changes in market needs and expectations. (Brannback, 1999 p.11) As Moore (1996, p.49) indicates, organisations should be customer-oriented and knowledge-based to meet unmet needs and unused ideas. By being both innovative and customer-oriented, an organisation should be able to remain competitive. To remain competitive, Pezy Group has to renew itself constantly. It should have the ability to learn, unlearn and adapt. The factors of diffusion of information and the globalisation of business contribute to the trend of being more customer-oriented.

Williams & Attaway (1996) indicate how the relational aspects of buyer-supplier interactions are important in developing and maintaining relationships, which are important for the long-term survival and profitability of an organisation. Williams and Attaway explain that sales representatives, who perform boundary spanning actions, generally have the most direct contact with the customer. However, in the analysis of this research regarding the customer orientation in a conversion phase of a product development agency in the Netherlands, it turns out that a majority of operational support help the account responsible but also interact with customers. Williams and Attaway emphasise the literary gap of how many practitioners struggle to develop and implement long-term customer-oriented interrelationships and strategies to stimulate the organisation's performance. This graduation research does not include the interpersonal skills such as customer orientation of individual supplier representatives, which maintain and increase the interaction with buyer representatives and the customer orientation or willingness of the buyer to refer the supplier representative to others. These remarks form the base to include in future research regarding the enhancement of customer orientation in service suppliers.